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EDITED BY

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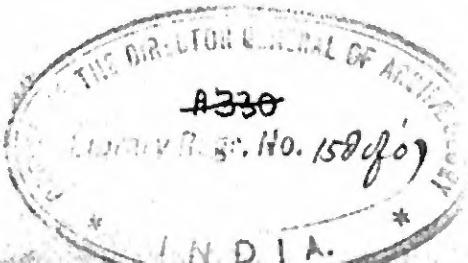
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M D C C C X C V I I



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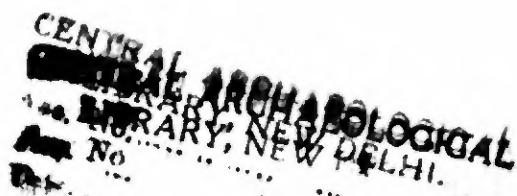
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# JOURNAL OF THE AMERICAN ORIENTAL SOCIETY.

*Sketch of the Historical Grammar of the Rig and Atharva Vedas.*—By EDWARD VERNON ARNOLD, M.A., Professor of Latin in the University College of North Wales, Bangor, North Wales, Great Britain.

Presented to the Society, April, 1896.

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## Abbreviations.

The following abbreviations are made use of, besides others that need no explanation.

A. See § 53. Cf. § 26.  
A. V. Atharvaveda.  
Avery, Moods. J. Avery, *Unaugmented verb-forms of the Rig- and Atharvavedas*, in JAOS. xi.  
Avery, Verbs. J. Avery, *Verb- Inflection in Sanskrit*, in JAOS. x.  
B. See § 53. Cf. § 26.  
Br. Brähmanas.  
C. See § 53. Cf. § 26.  
Delbrück. B. Delbrück, *Das Alttürkische Verbum*.  
Edgren, Semivowels. A. H. Edgren, *On the relation in the Rig-veda between the palatal and labial vowels, and their corresponding semivowels*, in JAOS. xi. 67-88.  
Gr. H. Grassmann's *Wörterbuch*.

Hopkins. E. W. Hopkins, *Prāgāthikāni*, in JAOS. xvii.  
Haskell, Sandhi. W. D. Whitney and W. Haskell, *Statistics of external vowel-combination in the Rig- and Atharvavedas*, in JAOS. xi.  
Lanman. C. R. Lanman, *Noun- Inflection in the Veda*, in JAOS. x.  
Old. H. Oldenberg, *Die Hymnen des Rigveda. Prolegomena*, Berlin, 1888.  
RV. Rigveda.  
Whitney. W. D. Whitney, *Sanskrit Grammar*, Leipzig, 1879.  
Whitney, Roots. W. D. Whitney, *The roots, verb-forms, and primary derivatives of the Sanskrit language*, Leipzig, 1885.

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## Explanation of the Tables.

The statistical tables aim at giving a complete summary of the occurrences in the Rigveda and Atharvaveda. But where a complete verse is repeated several times by way of refrain, only three occurrences are reckoned. No statistics of Sandhi are given for the Atharvaveda: but they are estimated at double the number found in C, C<sub>2</sub> taken together. In the Atharvaveda, and where the number of occurrences exceeds 500, only approximate accuracy is claimed for the Tables. Grassmann's *Wörterbuch* (including the Appendix) has been found to be absolutely trustworthy so far as it gives information: unfortunately its lists of some of the most important forms are incomplete, and as a rule, where there are two occurrences in one stanza, only one is recorded. Max Müller's *Index* has been found a useful supplement in these particulars, and has been consulted so far as has been practicable. For the AV., Whitsny's *Index* has been relied upon: but emendations suggested in it have not been incorporated: passages common to RV. and AV. are considered as belonging to the former only. Where the number of occurrences of any form is given without comment, the number in RV. is referred to, and if there is one only, the figure is omitted.

## INTRODUCTION.

§ 1. For the successful study of the Rigveda no preliminary is more urgently needed than a true grouping of its parts. Indian tradition has faithfully recorded for us the text of the hymns, but not their mutual relations: the order of the hymns and the mandalas is largely mechanical, and depends on the counting of verses and the ordering of deities, and not upon the antiquity or literary character of the poems. Yet all European students are aware that there is an order of time to be found, though they

differ greatly both as to the time-limits of the Rigveda as a whole, and as to the arrangement of its parts within those limits. Professor Pischel,<sup>1</sup> for instance, could write in 1879, "There is to-day scarcely room left for a doubt that many hymns are no earlier than the period of the Sūtras:" and the writers who agree with him are constantly busy in connecting Vedic hymns with later Sanskrit writing. On the other hand, H. Brunnhofer,<sup>2</sup> who asks 1000 years for the composition of the hymns, attributes them roughly to the period 2500–1500 B. C. To Pischel accordingly the hymns are a truly Indian product: to Brunnhofer they are the work of the poets of North Iran, from the Caspian Sea to the Punjab. To both writers, western and early, eastern and late are on the whole synonymous.<sup>3</sup> On the general question the present writer stands entirely on the side of Brunnhofer: and this article will include constant references to the literary peculiarities which separate even the latest hymns of the Rigveda by a broad gulf from the period of the Brāhmaṇas, and still more from the period of the Sūtras. On the other hand, the early dates suggested by Brunnhofer, though novel, seem to me not unreasonable: and this article will point to the long development of form and idiom in the Rigveda, for which adequate room must somewhere be found in a period wholly anterior to that of the Brāhmaṇas and even of the Atharvaveda taken as a whole.

§ 2. It is not however of the same importance to fix the absolute date of the Rigveda as to determine the relative date of its parts. For this latter purpose we depend entirely upon internal evidence; but this evidence exists in embarrassing abundance, and every writer on the Rigveda has taken it into account. A sketch of the principal theories so far put forward, largely by way of *obiter dicta*, will I think show that there is general agreement upon principles, and that the problem that remains is that of the faithful application of those principles to the mass of details which present themselves.

§ 3. H. Grassmann (*Uebersetzung*, 1876) noticed that the six mandalas, ii.–vii., were arranged according to one principle, and that in each the hymns to Agni stand first, those to Indra next, and then others according to certain mechanical rules. This arrangement is only broken occasionally by hymns or fragments which clearly betray a late character. So far we have (i.) six parallel family collections of hymns, (ii.) later additions to them at a period subsequent not only to the composition of the hymns, but also to their formal arrangement.

With these "family books" Grassmann contrasted the "collective books," i., ix., x., to which he assigned a later date on account of their miscellaneous character. In viii. he found a

<sup>1</sup> Gött. Gel. Anz., 1879, I, p. 163, quoted by Brunnhofer, p. xiii.

<sup>2</sup> *Urgeschichte der Arier in Vorder- und Central-Asien*, Leipzig, 1893.

<sup>3</sup> A different view on this point is taken by E. W. Hopkins, JAOS. xvii. 80 seq.

principle of arrangement wanting, and so assigned viii. a place midway between ii.-vii. and the remaining three books.

Grassmann's theory is sound as regards the books ii.-vii., where he found positive evidence; but as regards the remaining books it has long been obsolete. The series of family collections has been shown to extend to mandala i. 51-191, which includes nine collections duly arranged and rightly placed before book ii.<sup>1</sup> As to the remaining collections i. 1-50, viii., ix., x., it is sufficient here to notice that no positive link is shown to connect them.

Individual hymns and parts of hymns, believed by Grassmann to be later in date than the collections in which they occur, were placed by him in his Appendix. In many cases Grassmann also alleges the vocabulary as an indication of late date: but in others a hymn is relegated to the Appendix only because it is difficult or prosaic, and therefore not suitable for metrical translation.

§ 4. C. R. Lanman (*Noun-Inflection in the Veda*, JAOS. x., 1880) compared the date of the respective mandalas<sup>2</sup> by a statistical investigation of the occurrences of the respective noun-endings -ā -au (dual), -āsaḥ -āḥ (nom. masc. pl.), -ā -āni (neut. pl.), -eḥhiḥ -aiḥ (instr. m. n. pl.). Of these pairs of forms only the latter in each case is in use in classical Sanskrit. The statistics shew very clearly that the Atharvaveda stands very much nearer to classical Sanskrit in its use of these forms than does the Rig-veda. The later date of the Atharvaveda has been universally accepted by Sanskrit scholars on various grounds, but the credit of demonstrating this date by statistics belongs to Lanman.

Lanman proceeds to apply the same tests to the respective mandalas of the Rigveda, but without the necessary precaution of separating from each book those hymns which are later additions. He confirms Grassmann's view that the collections ii.-vii. are of much the same date, but he ranks viii. and ix. as earlier, x. as later. As he does not fail to point out, his results may be explained in two ways. Either the books as a whole belong to the order of time suggested, or certain books appear to be later because they contain a larger proportion of later hymns.

§ 5. H. Zimmer (*Altindisches Leben*, p. 355, 1879) deems ii.-viii. to be the oldest part of the RV.; and i., x. later. In the latter books he finds an astronomical terminology which he holds to be derived from Babylon. His argument however only applies to the hymns in which these terms are found, viz. i. 162, x. 55, 85: but it is not confirmed in his own mind by the general impression that books i., x. have made upon it.

§ 6. H. Brunhofer (KZ. xxv., 1881) made a statistical investigation of the infinitive forms in the Rigvedas, which he divided according to the families to which the hymns are attributed. This division has advantages over the division into mandalas, but

<sup>1</sup> Of this correction of Grassmann's theory Professor Hopkins is aware (JAOS. xvii. 28, second note); but he has not taken it into account.

<sup>2</sup> First published notice was in PAOS. for October 1877 = JAOS. x.

is in general agreement with it. As indications of early date he takes the infinitives in *-dhai* (2) and *-dhyai* (61): of late date, those in *-taye* (214), *-tyai* (5), *-tum* (4), as notes of the Brähmana period. Accordingly he places the family collections in the following order: Gautama (iv.), Bhāradvāja (vi.), Vāsiṣṭha (vii.), Atreya (v.), Vaiśvāmitra (iii.), Bhārgava (ii.), Āṅgirasa (i., viii.), Kānva (i., viii.).

Brunnhofer's work is carried out in a critical spirit, and with care in detail: and it is to be regretted that the author himself in his later writings minimizes the value of its method. But it must be noted, first that the whole number of infinitives distinguished as old and late is not large, and forms an insecure basis for so detailed an arrangement; secondly, that the statement that the infinitives in *-taye*, *-tyai* are notes of the Brähmanic period seems destitute of foundation, whilst a form in *-dhai* cannot be assumed on the strength of the single word *vayodhai*; and also that the forms *-tyai*, *-tum* hardly occur in RV. Brunnhofer has therefore only shewn us that no one of the family collections approximates to later literature in the use of infinitives: but that the "family books" use more often *-dhyai*, and the collections in i., viii., the form *-taye*. The relative date of these forms respectively remains for further investigation; see below, §§ 27, 354, 355, 358.

§ 7. II. Oldenherg (*Die Hymnen des Rigveda: Prolegomena*, Berlin, 1888) greatly advanced our knowledge. He was the first after Grassmann to make a list of those hymns which he believed to be later additions to the respective collections. In this he relied largely upon the arrangement, but he found still more distinct evidence in the prevalence in the latest hymns of a particular rhythm, which he names "the later Aonṣṭnbh." Further he traced in i. 1-50 and in viii. a common principle of arrangement, in so far as each consists of a number of small collections in which no precedence is given to the Agni hymns; in most of them the Indra hymns, which are most in number, precede. Thns the "family books" i. 51.-vii. are preceded and followed by the collections i. 1-50 and viii., which are connected by arrangement as well as by the metres prevalent in them, namely those in which the verses of eight syllables preponderate. This resemblance in metre is obvious, and yet has been neglected by the preceding writers in their arrangement: we may conveniently describe it by naming books i. 1-50 and viii. collections of *Sāman* or "song," in contrast to i. 51-vii., which are in the main collections of *Rik* or "recitation." Whether the "song" or "recitation" is on the whole earlier, Oldenherg does not attempt to decide. As to book ix., he points out clearly the evidence that the Soma hymns belong to the family collections, although they are no longer grouped with them. On one point, he has no doubt: books i.-ix. formed a complete whole, and were so recognized before the poems of book x. (in the main) were written. His arrangement of the RV. is therefore as follows: first, books i.-ix.; second, hymns added later to i.-ix.; and then x.

Oldenberg's argument is as just in what it decides as in what it leaves undecided, and the grouping i.-ix.; x. must on all grounds be preferred to Grassmann's unsupported grouping ii.-vii.; viii.; i., ix., x. The first is based upon a careful analysis of the character and form of the hymns: the latter merely on the superficial observation that the books viii., i., ix., x., as finally arranged, each contain more than one of the earlier collections which are the basis of all. Further, the later date of book x. is supported by a *consensus* of opinion: whilst the relatively later date of viii., i., ix. has been constantly called in question.

§ 8. Professor E. W. Hopkins (*JAOS.* xvi., 1894, and elsewhere) first examines the question of the date of book viii. by "the delicate test of sacrosanct numbers." Unfortunately he begins by assuming that books i., ix., x. form a group later than ii.-vii., whereas all that will be generally admitted is that x. is later. He takes note from time to time of individual hymns that are later than their surroundings, but apparently without binding himself to any definite list. In the books i., viii., ix., x. he finds a constant recurrence of the 'holy numbers' *three* ('three dawns', 'three far distancea', etc.), *seven* ('seven hotara,' 'seven rivers'), *ten*, *twenty-one*, *thirty-three*, and so forth. Of this investigation Hopkins himself writes that "the range is so small that the results can only be accepted tentatively;" and in this respect it stands in the same position as Brunnhofer's study of the infinitive forms. On the whole, I believe the argument to be sound, and that the increasing emphasis laid on these figures indicates a later date and a more technical school of theology. On the other hand the invention of a *Dvita* to accompany *Triti*a is only found in a late addition to book viii. (47. 16); and in the numbers 10,000 and 60,000, whether applied to cattle or conquered foes, I see no evidence at all of late date.

§ 9. At about the same time (in Roth's *Festgruss*, 1803) I investigated the occurrences of the letter *l* in the Rigveda. This too is an enquiry of limited range. The letter occurs much more frequently in AV. than in RV.; in the later hymns of i.-ix. and in x. more often than in the rest of the RV., but not so often as in AV. On the other hand it is extremely rare in books iv., vi., vii., viii., ix. This result tends to support rather the conclusion of Lanmaa than that of Brunnhofer or Hopkins, so far as concerns the date of book viii.

§ 10. The result of all these enquiries may be summed up as follows. The AV. has been shewn to be later than the RV.; in the RV. book x. has been shewn to be on the whole the latest part. There is a general agreement that books i.-ix. contain a number of hymns of much later date than the rest, but no precise agreement as to which these hymns are. Within the group i.-ix. it has been maintained that viii. is relatively early, and again that it is relatively late: and arguments of rather small range have been adduced on either side. As to the other books, there has been no adequate investigation: but it may perhaps be said that there is a rather wide *consensus* which places book vii. early, and book i. late.

§ 11. Thus if we compare the earlier parts of the Vedio collections to the mountain-tops, and the later additions to the plains below, we may say that the thick mist which has long enveloped the whole is gradually lifting, and that observers have been able to agree in describing the lower levels, and in assigning to each its appropriate vegetation. But the higher levels have only been dimly seen through the mists that overhang them, and their contour and relative heights are still matters of dispute.

§ 12. It is necessary however to notice that besides the more or less complete scientific researches referred to, we have a large number of assertions to which the same writers have committed themselves on comparatively slight grounds: assertions which are often quoted as though they possessed authority, and sometimes even as though they were obviously true and universally allowed. It is, I believe, a true criticism which gives high rank to the poetry of the Rigveda as a whole: but it is another thing to reckon as "late" every poem or phrase which in any way offends the taste of the reader! Faults of taste were perhaps not wanting to the earliest hymn-writers: and poetical capacity still lived in the period of the Atharva-veda, and has often revived amongst the Indians at later times.

In the following cases assertions as to the date of hymns seem ill-founded.

The hymns of Paruochepa (i. 127-139) have often been referred to as late: first perhaps by Kuhn (*Beiträge* iv. 212, 213)<sup>1</sup>. Yet their complicated metro has no parallel in later times.

The hymns ii. 36; iii. 7; 29; 31; v. 44; 61; 73; 87; vi. 46; 47 are all referred to by Hopkins as late hymns, some of them as "notoriously late" or "of Brahmanical date." In most cases Grassmann appears to be the authority, and his reason is that the hymns are mystical, obscure, or exaggerated. There is however no real similarity with the works of the epoch of the Brähmanas, and only a few verses of vi. 47 shew an approximation to the time of the A.V.

The hymns vii. 15-17 are mentioned by Hopkins (JAOS. xvii. 51, 59) as later than the first collection of Vasistha hymns, "as is well known." But Grassmann, who states that the hymns are out of order, still attributes to them an early date: and Oldenberg has shewn (p. 200) that the first two are in their order. The date of vii. 17 is an interesting question: the hymn is certainly out of order, but not necessarily late.<sup>2</sup>

<sup>1</sup> So Hopkins, JAOS. xvii. 79 "a tasteless late poet."

<sup>2</sup> See Lanman, p. 424.

<sup>3</sup> vii. 17 is a hymn closely resembling an Āpriya hymn, but containing only seven stanzas. It is worth noting that vii. 2, commonly recognized as the earliest Āpriya hymn, also contains 7 stanzas only, as does ix. 5. The stanzas vii. 2. 8-11 are borrowed from ii. 3. 8-11, as is shown by smaller indications of metre: whilst ix. 5. 8-11 are written in the later Anuṣṭubh metre, though appended to a Gāyatri hymn. Thus we have clear traces of a later recension in these two cases. The seven verses of the primitive Āpriya hymn probably corresponded to the seven hotars.

The *dānastutis* of book viii. have been often described as late additions, apparently from an unwillingness to believe that the poets of the Rigveda could accept reward for their work.

Of the Vālakhilya hymns, Hopkins states that "everyone admits that they cannot be classed among the old hymns of the Rigveda." There is however no internal evidence of late date, except for Vāl. 10 and 11.

Lastly a very important hymn, x. 61, in which the Iranian hero Nāhhūnedīṣṭha appears, has received a bad character from Lanman (p. 481), and has I think been described by him as "late and wretched bombast."<sup>1</sup> But however much the crudities of this hymn may jar, the evidence of vocabulary and forms points it out as one of the few early hymns in book x.

These and a few other hymns are however exceptions: in a greater number of cases even the chance criticisms of scholars are confirmed by evidence, as sufficiently appears by the list proposed in § 15.

§ 13. I am now obliged to refer with some fulness to my article in Kuhn's *Zeitschrift*, xxxiv. (or *Neue Folge* xiv.), 1896, which gives the basis upon which the body of this article is founded, viz. the division of the RV. into five parts, which are claimed to be the product of five successive epochs of literary activity, all anterior to the period of the AV., which accordingly represents a sixth period. For these results I am far from claiming finality: but I suggest that the time is past for us to use the vague words 'early', 'late', 'very late', and that in their place we need a definite arrangement, which may serve as an approximation and be corrected from time to time with the increase of our knowledge. I also suggest that it is time that the evidence of date, so abundant in quantity, should be measured. There is hardly a hymn in the Veda which does not suggest to the reader at one moment early date, and at the next late: and it is only the passionless indications of figures that will enable us to decide what value should be attached to these suggestions. Further I have attempted, in the article just cited, to include not merely one kind of evidence, but all to which it is possible at present to assign a tangible value: and though I have been far from succeeding completely in this attempt, yet the range of evidence I have embraced is I hope fairly typical of the whole.

§ 14. The later date of the Atharvan and *a fortiori* of classical Sanskrit is the fixed and proved fact upon which every investigator must and does rely. To separate from books i.-ix. those later hymns which approximate in character to the Atharvaveda is a first necessity: and the enquiry should be extended to book x. as well: for though we know this book as a whole to be later than the rest, it may well prove that it contains some proportion of earlier hymns. To separate the later hymns from the rest is on the whole no very difficult task: in vocabulary, grammatical forms, metre, subject-matter, and on the whole by posi-

<sup>1</sup> Cf. Hopkins, p. 55.

<sup>2</sup> Cf. Hopkins, p. 51.

tion, they are sharply marked off from the rest. They seem to me to belong to two successive periods, which I name respectively C<sub>1</sub> and C<sub>2</sub>. The hymns in C<sub>1</sub> are chiefly in a mixture of Triṣṭubh and Jagati verse, such as is commonly found in the Atharvan, and they are addressed to a great variety of deities, not prominent in the rest of the Rigveda. The hymns in C<sub>2</sub> are chiefly in the later Anuṣṭubh metre<sup>1</sup>. I give the list of hymns in parallel columns, with some short description of each.

The appended letters G. L. O. H. denote that the hymns have also been described as late by Grassmann, Lanman, Oldenberg, and Hopkins respectively. The following symbols denote the evidence I rely upon in each case :

- a. mixed Triṣṭubh-Jagati verse, or Triṣṭubh with extra syllable<sup>2</sup>.
- β. later Anuṣṭubh verse.
- γ. late vocabulary and grammatical forms.
- δ. position in the collection.
- ε. subject-matter.

For a more exact statement of the argument I must refer readers to the article in KZ. In this summary the evidence for the periods C<sub>1</sub>, C<sub>2</sub>, is not distinguished.

§ 15. List of the latest hymns in the Rigveda—see next page.

§ 16. Some reference may now be made to previous investigations in relation to these lists. Of the three hymns referred to by Zimmer as implying a knowledge of technical astronomy, viz., i. 162, x. 55, 85, two are included. The reference in x. 55 is not a certain one: yet it may be right to include the group x. 54–56 amongst the later hymns. Only the smaller half of book x. is included: of book i. the three hymns 182–184 are of such unusual length as to make the late matter quite an appreciable part of the whole book. Without, therefore, accepting the theories either that book x. or that books i. and x. are later than the rest, these lists would by themselves go far to account for the general impression that such is the case.

§ 17. In a great number of hymns (especially in C<sub>2</sub>), the evidence is cumulative and generally accepted as conclusive: but there are not wanting hymns in which there is only a balance of evidence and a difference of opinion: it is then necessary to decide on the value of the different kinds of evidence respectively, as to which I come to the following conclusions:

(α) The mixture of Triṣṭubh and Jagati verse (as defined KZ. p. 314) is sometimes contradicted by other evidence, and is therefore not a decisive sign. (β) The later Anuṣṭubh-rhythm, where well marked, is an unfailing sign of the latest date: but the beginnings of this rhythm may be found in C<sub>1</sub>, and even (very faintly) in earlier hymns. (γ) Late words and grammatical forms are sure signs of late date: see next section. (δ) Position in the collection is not a safe guide. Several hymns for which there is good evidence of late date (at any rate as far as the period C<sub>2</sub> is

<sup>1</sup> See Oldenberg, *Prolegomena*, pp. 26–81; and KZ. xxxiv., pp. 802, 8.

<sup>2</sup> The type of such verses (e. g. Vāl. 11. 7d) is

— | — | v || u u v | — u | — .

## § 15. Latest hymns in the Rigveda.

	C.	C.	C.	C.	
i.	23. 19-24. Āpaḥ 24. 6-15. Varuṇa 91. 18-23. Soma 93. 4-8. Agni-Soma 115. Sūrya 133. 1-5. Charm 101. Rbhavāḥ 102-104. Horse-sacrifice 179. Rati: Lopāmu- drā myth 188. Āpriya 191. Charm	γδ O γ O γδ O αε γ ε GLO γ aβγδr GLOH γδr GO γδr GLO	i.	23. 1-6. Ulukhala 50. 10-13. Charm 170. Indra, Maruts	βγr βγδr GLOH γ
ii.	12. Indra 32. 4-8. Charm to Sibi- vāli 89. Agyins 40. Soma-Puṣan	γ aβδe O γ H γ L	ii.	42, 43. Çakunta	aγδe GLOH
iii.	8. Yūpa 28. Agni 33. Viçvāmitra and the rivers	ε H δ O βε	iii.	53. 17-24. Charm	βγδe GLOH
iv.	13. Viçve Devāḥ 18. Myth of In- dra's birth 57. Kṣetrapati, etc. 58. Ghṛta, etc.	γ γ βγδe GOH aγδ GOH	v.	40. 5-9. Atri Myth 44. 14, 15. Agni 51. 11-15. Viçve Devāḥ 78. 4-9. <sup>1</sup> Charm	βγδ GO aγ GH βγδ OH βγδe GO
v.	62. Mitra-Varuṇa 83. Parjanya	γ aγ	vi.	47. 29-31. Dundubhi 74. Soma-Rudra 75. Weapons of war aβγδe	aγδe GO γδ O aβγδe GOH
vi.	9. Agni Vaiçvānara 28. Indra, Gāvah 47. 26-28. Vanaspati and Ratha 48. 22. Cosmogony	γ αε de GO γε G	vii.	50. Charm 55. Charm 103. Frog-Brahmans 104. Charm	aγe GLH βγδe O γδe GOH aγδe GOH
vii.	33. Vasiṣṭha myth 44. Dadhikrā 59. 12. Charm 101, 102. Parjanya	γδ GLOH a de GOH γ	viii.	47. 14-18. Ādityāḥ, Uṣas Väl. 10. Unity of gods <sup>1</sup>	βγ G γe H
viii.	1. 33, 34. 31. 1-4. <sup>1</sup> Worshippers 33. 16-19. Woman's duties Väl. 11. Indra-Varuṇa viii. 80. Indra 89. 7-12. Vāc	γε GH ε GH γε GH aγ βγ H βε GH	ix.	5. 8-11. Āpriya 67. 81, 32. <sup>1</sup> 118. Soma 114. Soma	β βγδ GO βγδ OH βδ GO
ix.	112. Professions	βγδ O			

<sup>1</sup> These entries correct accidental errors in the list in KZ.<sup>1</sup> ii. 48 only.<sup>1</sup> Wanting in several MSS. of pada-pāṭha.

§ 15. Latest hymns in the Rigveda—Continued.

	C <sub>1</sub>		C <sub>2</sub>
x.	9. 6-9 = i. 23, 20-23. Myth of Yama and Yamī	ayē	x. 16-19. Funeral hymns
10.	Havis	ar G	24. 4- 6. aþyē
13.	Funeral hymn	aþye LH	Açvins
14.	"	ae	Manas
15.	Indra	a G	Birth of the gods
27.	Myth of Indra and Vasukra	a	Myth of Sūryā's marriage
28.	The dice	ayē	Agni Rakşolan
34.	The hidden Agni	a	Creation of the castes
61-53.	Nirṛti, Asamāti	þye	The herbs
59. 66.	Añgirasali	aþ	Myth of Mud- gala
71.	Knowledge	aye	Indra-Bṛhaspati
75.	The rivers	ar L	Dakṣinā
81, 82.	Viçvakarman	aye	The Brahman's wife
83, 84.	Manyu	ae	Numbers
86.	Myth of Viṣṇa- kapi	ye G	Who?
88.	Birth of Agni		Viçve Devāḥ
91.	Agni		Bhāvavṛtta
94.	Grāvānah	ae	Yama : Muni : Charm
95.	Myth of Urvaçī	ae GH	Charm : Aran- yāni
98.	Charm for rain	aye	Faith : Indra
101.	The priests	ac	Yama : Arḍyī
108.	Myth of Saramā	ye	The sun : the rival
117.	Charity	aye L	Charms : Vāta
125.	Vāc	aye	Praise of king :
127.	Night		grāvānah
139. 4- 6.	The Gandharvas	c	178-175. The sun
142.	Agni	þ	181-188. Variions : Vāta
149.	Savitar	þð	190. The creatiou
178.	Tärksya	ðe	191. 2- 4. Concord

concerned) appear in their right place in the collections of books i.-ix.: others which are out of place, as iv. 15. 4-10; 48; v. 61; 87; vii. 17, not only shew no other signs of lateness, but have many of the marks of early date afterwards to be described: whilst the majority of the hymns of book x. are also free from other late notes. It would therefore seem that the ordered collections of i.-ix. were not complete collections of the hymn-material existing at the time when the collection was made. (c) The subject-matter of the late hymns differs on the whole widely from that of the bulk of the Rigveda, and consists largely of hymns to minor deities, myths, charms, and hymns for ceremonial occasions. It is not however possible to draw a sharp line between the different groups in this respect, and it is particularly dangerous to be guided by subjective impressions of this kind.

§ 18. Of the evidence of vocabulary and grammatical forms more careful consideration is required, especially as this evidence

<sup>1</sup> x. 130 only. <sup>2</sup> x. 136 only. <sup>3</sup> x. 162, 163, 164 only. <sup>4</sup> x. 181 only.

<sup>1</sup> In attributing late date to these hymns, I have been led rather by the absence of the usual characteristics of the early hymns than by any positive indications.

has of late been depreciated in more than one quarter.<sup>1</sup> It is indeed most necessary to keep in mind the drawbacks to the use of this evidence. The occurrence of a word or form undoubtedly late does not necessarily imply that the hymn in which it is found is late : the word may have been introduced in a later recension, or in an added verse : it may even be a premature creation, not destined to be accepted as part of the current language till later centuries. Nor does the occurrence of an early form prove early date : it may be an archaism deliberately introduced for effect.<sup>2</sup> Especially with regard to the vocabulary do these doubts arise. The hymns of books i.-ix., numerous as they are, keep within a narrow range of ideas: and hundreds of words must certainly have been in common use at the time when these poets wrote, which never gained admission into the sacred circle;<sup>3</sup> it is therefore not impossible that some of them may appear once or twice only, even in hymns of early date.

§ 19. These difficulties, so serious in detail, disappear almost completely when the vocabulary and forms are treated on a large scale. I have noted<sup>4</sup> about 125 words and groups of words each of which occurs at least 50 times in the RV., being 20 times as often as in the AV., or 25 times in the RV. and not at all in the AV.: nor do these words recur in later Sanskrit:<sup>5</sup> and about 170 words which occur 15 times at least in the AV., being  $1\frac{1}{2}$  times as often as in the RV., and all of which occur regularly in later Sanskrit: besides a large number of forms which fulfil similar conditions. Of these words and forms as a whole but one explanation is possible : the former represent an earlier, the latter a later stratum of language.<sup>6</sup> Hymns in which the former prevail are early hymns : those in which the latter prevail are relatively later. We may indeed imagine the case of a scholar so thoroughly immersed in the literature of an earlier period as to produce a poem entirely of an earlier style : but this presupposes a critical attitude which we have no reason as yet to assume to have been possible to hymn-writers of any of the periods we are now considering. The occasional introduction of a few archaisms

<sup>1</sup> E. g. by Brunnhofer, who has practically abandoned the use of evidence of this kind.

<sup>2</sup> This is well brought out by Hopkins, who writes (JAOS. xvii. 24) : "It must not be supposed that the statistical results based on analysis of forms must necessarily be interpreted quite as they have been." The new interpretation suggested is that "poets that desired to give archaic effect to their productions could do so very cheaply by overcrowding their verses with metrical or formal archaisms."

<sup>3</sup> Cf. Hopkins, loc. cit., p. 57.

<sup>4</sup> KZ. xxxiv. 805, etc.

<sup>5</sup> Except now and then in the Brāhmaṇas, possibly in their more archaic part.

<sup>6</sup> Of this evidence Prof. Hopkins writes: "That this test is a futile one is evident. The subject-matter, as the author grants, is the determining factor in many cases. That the list of 'later words' includes *cvdn*, *vargd*, *sarp*, *uddra*, etc., is sufficient to shew the comparative uselessness of this test." To the criticism (JAOS. xvii. 26, 27) of my article from which this passage is taken I take exception, on the ground

would not be likely to affect greatly results deduced from the 18,000 notes tabulated under the headings of Vocabulary and Metre in my article.<sup>1</sup>

§ 20. Although the groups C, C, appear to be distinctly earlier than the Atharvaveda, yet in vocabulary at least there appears a still greater difference between them and the remaining part of the Rigveda. Indeed in passing from the Rigveda proper to these later additions, the whole world of thought and expression seems to be changed. The difference between the Rigveda proper on the one hand, and these later hymns and those of the Atharvaveda on the other, is the fundamental distinction maintained in this article; and it is quite different from the older distinction between RV. (without qualification) and AV. But the evidence of grammatical forms and of metre does not point to a difference quite so marked. Thus, of the forms considered by Lanman,<sup>2</sup> the dual in -au, which in the earlier Rigveda is only

of the inaccuracy of the statement of my own views, and the want of proportion in the objections made to them. Hopkins first states that I (Arnold) "desire to shew" that the Kānva collection is of early date, and that I endeavor "to support the proposition that it is older than the other family books." The conclusion at which I actually arrive is rather different from this: for though I rank viii. as earlier in the main that the collections i. 74-93, 94-115, 116-126, 140-164, ii., iii., v., yet I can find no valid reason to place it before i. 58-63, 64-78, 127-139, 165-191, iv., vi., or vii.

Of the three kinds of evidence on which I mainly rely, he puts out of court that of metre, by quoting an alleged admission of mine that "words and forms are a safer guide." This however goes far beyond my statement, which is that "in comparing this period (B<sub>1</sub>) with that of the later Rigveda, the words and forms are a safer guide than even the metre." Where a marked change of metre is to be traced, that is almost everywhere in the Rigveda except at this particular point, I should be inclined to attach fully as much importance to it as to a change in vocabulary or forms: and the more so, because we have every reason to suppose that the poets of the Veda were entirely unconscious of the more subtle changes which the metre was undergoing in their hands. Hopkins's next statement is that "it is the treatment of the test of vocabulary which here calls for special notice. . . . To avoid a vicious circle, the only test here of early and late must perforce be the number of times these words are found in AV." This is again incorrect: a further test, and one which in seven-eighths of the instances confirms the first, is the occurrence or non-occurrence of these words in classical Sanskrit.

As to the words quoted by Hopkins from my list of "later words," it may very well be that they belonged to the earlier language, but they certainly were not admitted to the earlier literature. At the same time any special explanations which may be brought forward to qualify the importance of single words will not appreciably affect the weight of the whole body of evidence. That Prof. Hopkins's criticism was somewhat hastily put together I think I may conclude from the fact that one of the four words to which he takes exception in my list of later words is udāra, whilst on p. 61 he himself lays special stress on the same word, as an indication of the late date of book viii. and of the Avesta alike. I have therefore nothing to withdraw in my original statements: nor do they involve any such contradictions as Professor Hopkins supposes.

<sup>1</sup> KZ. xxxiv., p. 315.

<sup>2</sup> See above, § 4.

found in 2 per cent. of the occurrences, includes in C<sub>1</sub> and C<sub>2</sub> 25 per cent., in AV. 60 per cent.: and the forms in -āh, -āni, -āih only shew a moderate increase of about 10 per cent. in C<sub>1</sub> and C<sub>2</sub>, but a further increase averaging 25 per cent. in AV. The explanation I suggest is that the change of taste first shewn in C<sub>1</sub> is greater than the interval of time: and that then for the first time the poets addressed themselves to an entirely new range of subjects, and began freely to use words belonging to a vocabulary which their predecessors had excluded. Roughly speaking, we may say that the poets of the later hymns brought the Veda down from heaven to earth, from the gods enthroned on high to the humbler spirits of the river and the wood, and from the great deeds of tradition to the daily virtues or failings of kings and bards, to the celebration of marriage and death, to the cure of disease and the expulsion, by wisdom's aid, of the hated rival in a husband's love.

§ 21. A division of the hymns of the Rigveda proper cannot be made with the same definiteness or certainty. But the same principles which have led us to separate off the works of the periods C<sub>1</sub>, C<sub>2</sub>, seem to me to lead further. And first hymns and groups of hymns can be found which stand very distinctly nearer to C<sub>1</sub> and C<sub>2</sub>, than the remainder. All the hymns remaining of the groups i. 31-35, 94-115, 116-126, almost all left in x., and the majority of those in i. 51-57, 140-164, as well as numerous individual hymns chiefly in ii., iii., iv., have a much greater proportion of later words and forms than the rest: they employ the Trisṭubh and Jagati metres in almost equal proportions: and in both they affect the "eretic" rhythm -u- for the fifth, sixth, and seventh syllables when immediately following the caesura. This rhythm is rare in the other hymns of the Rigveda proper, but even more common in C<sub>1</sub> and C<sub>2</sub>. Further they show occasionally a mixture of Trisṭubh and Jagati, and other peculiarities characteristic of the later hymns. In subject they do not differ so greatly: but a special importance seems to be given to Agni under his special titles, and to the Sūn, the Dawn, the Waters, and other nature-deities. This group I have denoted by B<sub>1</sub>.

§ 22. Even in the remaining hymns a marked difference in metre may be observed. Some of the Trisṭubh hymns,<sup>1</sup> especially those of book vii., shew frequently iambic rhythm throughout, and not rarely are defective by one syllable in the middle: whilst elsewhere the caesura is almost invariably followed by two successive short syllables which break the rhythm, and the full number of 11 syllables is invariable. That the typical hymns of book vii. are the earlier has been the general belief of modern scholars (see above, § 10); and this supposition, which alone gives an orderly development to the Trisṭubh-Jagati metre<sup>2</sup>, is confirmed

<sup>1</sup> Jagati hymns are here comparatively rare.

<sup>2</sup> The cretic rhythm characteristic of B<sub>2</sub> is even more strongly opposed to a continuous iambic rhythm; see note 1 on the next page.

hy the evidences of vocabulary and metre.<sup>1</sup> In determining the relative date of the hymns of the Sāman type, there is greater difficulty. That the Sāman hymns which are included in the family collections from i. 51 to vii. are early, admits of little doubt: and not least the Parucchepa collection i. 127-139, in which the rhythm of the twelve-syllable lines entirely corresponds with the Trīṣṭubh rhythm of book vii. All the hymns at the end of book ix. (98-111), and all other hymns in the same metres (principally Anuṣṭubh, Br̥hati, and Uṣṇih), have every sign of early date: such verses as are of twelve syllables conform to the early Trīṣṭubh rhythm, and the metres themselves are almost completely wanting in the later parts of the Rigveda. Only with regard to the Gāyatri metre does a doubt arise. The arrangement of book ix. indicates that this metre was looked upon as lying outside the group just described. It continued in use till much later times, and yet no important distinction of rhythm has been traced.<sup>2</sup> Further, many of the hymns consist of no more than three stanzas, and therefore their date is not easily tested. Yet the Gāyatri hymns as a whole are almost entirely free from the notes of late date, whether in vocabulary or grammatical forms, to which reference has just been made: and no solid reason at present appears why they should not be assigned to as early a date as the hymns of the earlier iambic rhythm, making with them an early period A: whilst the hymns which follow the most strict, and perhaps the most perfect type of the Trīṣṭubh metre, are assigned to an intermediate period B.<sup>3</sup>

§ 23. These results are entirely consistent with the statistics brought forward by Lanman, and indicate that the proportion of later forms in each book corresponds to the amount of later material it contains: but at the same time they do not claim for any part of books i. 1-50, viii., or ix. that it is the earliest part of the Rigveda. They are opposed to those theories which postulate for any of these books a date later than the average of books ii.-vii. On this point we are therefore no nearer to a consensus of opinion, and it becomes necessary to consider the evidence for the opposing views.

§ 24. For convenience of reference the hymns referred by me to the periods A, B<sub>1</sub>, B<sub>2</sub>, respectively will be tabulated here: it being understood that the criteria of date allow a much greater margin of doubt as to the position of individual hymns than exists with regard to the periods C, C<sub>2</sub>.

<sup>1</sup> The prevailing types are as follows:

In A  $\underline{u} - | \underline{v} - || \underline{u} \circ \underline{v} | \underline{- v} | \underline{- v}$  and  $\underline{u} - | \underline{v} - (\underline{v}) || \underline{v} \circ | \underline{- v} | \underline{- v}$

B<sub>1</sub>  $\underline{u} - | \underline{v} - || \circ \underline{v} | \underline{- v} | \underline{- v}$  and  $\underline{u} - | \underline{v} - || \circ \underline{v} | \underline{- v} | \underline{- v}$

B<sub>2</sub>  $\underline{u} - | \underline{v} - || \circ \underline{v} | \underline{- v} | \underline{- v}$  and  $\underline{u} - | \underline{v} - || \circ \underline{v} | \underline{- v} | \underline{- v}$

<sup>2</sup> A trochaic rhythm appears in a few of the older hymns, but is rare even in them.

	A		B <sub>1</sub>		B <sub>2</sub>	
	Säman.	Rik.	Säman.	Rik.	Säman.	Rik.
bk.	2-10		11		1	
i.	12		23		13	
	14-21				23. 10-18	
	23. 1-15	24. 1, 2				
	24. 3-5					
	25-27					
	28. 7-9		29			
	30					
	36		37, 38			31-35
	39-43. 6				43. 7-9	
	44-50. 9					
	55-57					51-54
	58					
	60, 61					59
	63					
	65			00, 67		
	68-70					71-73
	74, 75			76, 77		
	79. 4-12			79. 1-8		
	84. 1-9			83		84. 16-18
	18-15					85
	19, 20					
	86			87		
	88					89
	90				91. 5-17	91. 1- 4
	92. 18-18					02. 5-12
					93. 1- 3	
					9-12	
					97	94- 96
					105	98-104
						106-114
		122				116-119
						121
					126. 6, 7	128-126. 5
	127-182					
	183. 6-189					
	150	149			142	140, 141
		151-156				148-148
						157-160
		165		166		
		167-169				
	172	171				
	175, 176	178, 174				
		177, 178				
		181				
		183-186				
				187	189	180
						182
						190

	A		B <sub>1</sub>		B <sub>2</sub>	
	Sāman.	Rik.	Sāman.	Rik.	Sāman.	Rik.
bk. ii.	5- 7 41. 1-15 19-21	11	8 22 41. 16-18	1, 2 9, 10 13, 14 16 18-21 25-27 31, 32. 1-8 34 38		3, 4 15 17 23, 24 28-30 33 35-37
bk. iii.	9-13 16 27 37 40-42 51. 10-12 59. 6- 9 62. 4-18	25	24	1 6 14, 15 19, 20 31 35 38 43 46-50 51. 4-9 53 59. 1-5 61, 62. 1-3	21 44, 45	2-5 7 17, 18 22, 23 26 29, 30 32 34 36 39 52, 53. 1-16 54-57 60
bk. iv.	8-10 15 81, 82 37. 5- 8 46-40 52 53. 8-10 56. 5- 7	1, 2 14 16 20-22 29 30 36, 37. 1-4 41 48-45 50. 10, 11 55. 1 -7 56. 1 -4		3 17 23 25 35 42		4, 5 7 11, 18 19 24 26-28 33 38-40 50. 1-9 51 58, 54
bk. v.	7 0, 10 13, 14 16-18 20-26 35 38, 39 60 51. 1-10 52		5, 8 19 27. 4-6 40. 1-4 42-44. 13 45 48, 49 57	2-4 8 11, 12 15 27. 1-8 29 33, 34 42-44. 13 45 48, 49 57	28. 4-6	1 28. 1-8 30-32 36, 37 46, 47 54, 55 58-60

A		B <sub>1</sub>		B <sub>2</sub>	
Sāman.	Rik.	Sāman.	Rik.	Sāman.	Rik.
bk. v. con- tin'd	61. 1- 4 11-19 64-68 70-74 78. 1- 3 86, 87			63 69 75 70, 77 79 83	61. 5-10 82 84
bk. vi.	2 14 16. 1-45 19-21 23-26 42, 43 44. 1- 6 46, 46 48. 1-21 51. 18-18 52. 7-12 69, 60. 4-12 61. 4-12	3, 4 10-13 15. 1-15 44. 7-24 60, 51. 1-12 60. 1-8		1 17, 18 22 27 30 49 60. 13-16 61, 1-3 62 64, 65 69, 70	5-8 15. 16-19 16. 46-48 47. 1-25 52. 1-6 18-17 63-57 68 61. 13, 14 72
bk. vii		1- 4 7, 8 11, 12 15, 16 17 18-25 27-30 81. 1-0, 32 81. 10-12, 34 38-40 42, 48 45 48 61-53 56-58 69. 1- 6 9-11 66. 1- 9 74 81 94 90		26	5, 6 9, 10 13, 14 18 35 41 46, 47 49 54 69. 7, 8 78-80 82, 88
bk. viii.	1. 1-82 2-8 9. 1- 9 18-21 10-18 15-28 39 31. 5-88. 15 34-88 42. 4-6 43-40	9. 10-12		75-77 97-100	89 14 29 39-41 47. 1-18 48



§ 25. The intricacies of this arrangement make it difficult to follow, as compared with those in which the different books are treated as homogeneous wholes. As however all general indications lead us to believe that books i.-ix. grew up simultaneously, and as within each collection the arrangement is purely mechanical, it is impossible to arrive at the chronological order except by a consideration of the individual hymns.

§ 26. In order to aid the memory some general characteristics of the successive periods may now be given.

A. The hymns of this period include almost one half of the Rigveda, and almost the whole of the hymns in Anusūbh and the allied metres. The Trīṣṭubh hymns retain to a large extent a continuous iambic rhythm: Jagatī is rare. Hymns to Mitra and Varuṇa are found almost exclusively in this period, but they are far outnumbered by the hymns to Indra and (to a less extent) by those to Agni. The Sūman collections usually place the hymns to Indra, as the most numerous, first in order. As a whole this period may be shortly described as the period of iambic verse, or the Indra period.

B. The hymns are almost exclusively composed in strict Trīṣṭubh metre, and the iambic rhythm is broken after the caesura by a succession of two short syllables. The Agni hymns almost equal in number those to Indra, and in the collections in which most of the hymns occur have the precedence.<sup>1</sup> This period may perhaps be described as the Trīṣṭubh or Agni period, and covers about 20% of the Rigveda.

C. The hymns are composed in Trīṣṭubh and Jagatī in about equal proportions and frequently employ the "Crctic" variation.<sup>2</sup> Specially prominent are those addressed to Agni as Vaiśvānara or Jitavedas, to the Sun, the Dawn, Earth and Heaven, and the Waters. The hymns include about 30% of the Rigveda, and the period is one of Nature-Worship.

D. Trīṣṭubh and Jagatī begin to be confused and combined in the same hymn: the hymns are addressed to the minor deities of nature and tradition. This period may be known as that of Myth or Folk-Lore.

E. The later Anusūbh metre predominates, and the hymns approximate to incantations. This is the period of Charms.

§ 27. Generally opposed to this arrangement is that advocated by Brunnhofer in KZ. xxv. (see above, § 6, p. 207). As we have seen, the substantial part of his argument resolves itself into a comparison of the number of occurrences of an "old" infinitive -*dhyai*, and a late infinitive -*taye*. The antiquity of -*dhyai* is undisputed; it therefore deserves notice that of its 75 occurrences (see below, § 358) no less than 16 are in book i. (including two in the Parucchēpa hymns), and two in x. 61: and lest this or

<sup>1</sup> It is not however shewn that this precedence was recognized at the time at which the hymns were composed.

<sup>2</sup> See § 21 and note to end of § 22.

any other evidence should be overrated, it should further be noticed that there is an occurrence in one of the very latest hymne, viz. Väl. 10. 3. Of the 75 occurrences, 69 are at the end of a Trisṭubh veree : of these 2 are in book viii. (Väl. 9. 3 ; 86. 14)<sup>1</sup>, which is a full proportion for the very small amount of Rik in that book. Of the six occurrences in Sāman all are in books i., viii., ix., x., viz. i. 27. 1; 129. 8; 134. 2; viii. 39. 1; ix. 110. 1; x. 22. 5, although the other books include a not insignificant amount of Sāman. The occurrences therefore depend on the metre, not on the book or family. Further of the 69 occurrences at the end of Trisṭubh vorses, no less than 44 are in the comparatively small amount of Rik of iambic rhythm, included in period A. This form therefore entirely confirms the arrangement already made. No less does the form in -taye do so. This form is almost equally old, for it occurs 264 times in RV., and only 4 times in AV.: and of the 264 occurrences, 200 are in period A. This form too almost always occurs at the end of the verse : and though it is therefore not suited for the early Trisṭubh hymns, it is quite frequently found in the Sāman of all books. Jagatī hymns, for which this form is also suited, hardly occur before the period B., by which time this form was practically extinct.<sup>2</sup>

§ 28. Professor Hopkins further discusses<sup>3</sup> the date of book viii. of the Rigveda in vol. xvii. of this Journal. His position is summed up as follows on page 71.

"When a large body of worde is found at the end of a certain literary period, when this body is found continuously employed from the said end of a period to one that is much later, then in the first period any one book that contains a vocabulary identical with that of the books constituting such end of a period will probably belong to the conclusion of the period rather than to its beginning.

If this be so, then the eighth book of the Rigveda, in its vocabulary, which agrees in so many details with the vocabulary of the later books of that work, with the later Atharvan, and with the still later Brähmapas and Epic, probably stands nearer to the end of the period represented by the whole Rigveda than to the beginning of that period," i. e. it is probably later than books ii.-vii.

It will be seen at once that Professor Hopkins accepts the same criterion of late date as that used in this article : viz. the continuous employmenut of a word in a later period. By the "later books" of the Rigveda be means the "general booke," i., ix., x.: whereas in my view a considerable part of books i. and ix., and a small part of book x. is early. His conclusion seems diametrically opposed to my own : for I assign a very much larger proportion of book viii. than of books ii.-vii. to the earliest period.

§ 29. I cannot therefore avoid discussing Professor Hopkins's arguments, both with regard to what he brings forward and to what he passes over. In his article there are examined 600 words which occur in book viii., of which 340 appear nowhere else in

<sup>1</sup> Also of course Väl. 10. 3, already referred to.

<sup>2</sup> See below, §§ 359, 365.

<sup>3</sup> See above § 8.

the Rigveda, and the remaining 260 only in books i., ix., x. After examining these words individually he finds there are "a few words which may be old: and a large number, any one of which might indeed by chance have escaped repetition: but their sum is momentous and indicative of a close relationship between viii. and the later language."

§ 39. This point I think Professor Hopkins fails to prove. Of the 600 words, there are 150 which occur in viii. only, and for which no parallels elsewhere are adduced: and further, 74 for which the parallels are more or less remote. Next there are 93 which have parallels only in those parts of i. and ix. and (in 7 cases) of x., which are similar in character to book viii., and presumably of the same date. There are therefore almost 300 words of which we must say not only that they "may be old" but that, taken as a whole, they represent an older stratum of language.

Next I find 179 words which recur in the body of book x. or in some later book, but so rarely or with such altered meaning that this recurrence hardly shews late date: and lastly 133 (less than a quarter of the whole) which occur at least 3 times in the latest parts of the RV., the AV., or in later books.

I am unable to attribute any importance to any words except these 133 as shewing late date<sup>1</sup>. Few of them occur more than once in book viii.; 18 occurrences are in the few fragments of book viii. which are of periods C<sub>1</sub> C<sub>2</sub>, viz. 1. 33, 34; 31. 1-4; 33. 16-19; 47. 14-18; Vāl. 10 and 11; 80; 89. 7-12; 31 belong to the comparatively few hymns assigned to period B. There remain 112 occurrences which are indeed scattered over the bulk of the book, but cannot be said to represent it.

§ 31. I pass to the evidence which Professor Hopkins omits, not however without reference to a typical example (p. 79): "If Grassmann's assumption that *átha* is a late form of *ádha* were correct, then the facts about these words, so far as they go, would make against the view that viii. is not early. But both forms are used in book x., and both *átha* and *ádha* are Avestan. Probably one is as old as the other." The probability however lies otherwise, according to Hopkins's own rule as quoted in § 28. *Ádha* occurs 102 times in RV., 16 times in AV., and then disappears: *átha* occurs 133 times in RV., 164 times in AV., and constantly later. Whenever and wherever these words had their beginning, *ádha* undoubtedly was the first to perish, and *átha* replaced it. But book viii. uses *ádha* twice as often as *átha*, that is more frequently (in proportion) than the RV. as a whole, and twenty times as often as the AV. This pair of words therefore alone affords a strong argument for the early date of book viii.<sup>2</sup>

§ 32. If in place of examining words that occur so rarely that we have no evidence of their date, we choose those which occur

<sup>1</sup> Some of the others may recur as often, for there are no indices in existence except for the AV. But the words can hardly be of importance, considering the liberal scale of the references in the PW.

<sup>2</sup> See below, §§ 449, 451.

with fair frequency, the argument will I think rest on surer grounds. Merely as an example, I have examined those words of which *ádha* and *átha* may be considered types, viz. the adverbs and pronouns. I find 17 words or groups, each of which occurs at least 40 times in the body of the Rigveda (AB), being 8 times as often, or, proportionately, 4 times as often, as in the late hymns of the RV, and the AV.; or 25 times in the former and not at all in the latter. These are *ádha* (used with other particles), *ámuśák* (with *sánuśák*), *ím*, *gha*, *tmánā*, *dvítī*, *ná* 'like,' *nákiḥ*, *núnum*, *maksñ*, *sáca*, *satrā* (with its derivatives), *sim*, *syá*, *tyá*, and the adverbs in -*vat*. I find 23 words and groups which occur at least 20 times in the late hymns of RV. and in AV., being twice as often as in AB, that is, proportionately four times as often: namely *átha u*, *adáh* (pronoun and adverb), *untarā* and compounds, *itáh*, *iti*, *enu* (pronoun), *evá*, *tatáh*, *ítára*, *táthā*, *dírám*, *paráh*, *pára*, *pucçá*, *púnar*, *píthak*, *yátra*, *va*, *vai*, *súrva* 'all,' *sahá* and compounds, *svádhā*, *svid*. These words are representative of a much larger number that might easily be collected from the whole vocabulary (see KZ. xxxiv., pp. 330, 331).

§ 33. In the margin are given the number of occurrences of these words in books ii.-vii. and in book viii. respectively, and also the proportion of later words, viz. the number of later words in every hundred of both kinds taken together: these numbers are also arranged according to the divisions A B, the occurrences in those hymns which are altogether later being omitted from both sides. It appears that the proportion of late words in ii.-vii. and in viii. as a whole is practically the same: in the parts here assigned to B again the same. But in the earlier parts of ii.-vii. it is considerably less than in the earlier parts of viii.

Upon this result it would not be safe to lay too great a stress, as the number of occurrences included is not high. Should it be confirmed by other indications, the necessary conclusion would be, either that the A hymns of ii.-vii. contain earlier hymns than any in viii.,<sup>1</sup> or that in book viii. the later material has not been sufficiently noted in the Tahles': or these two hypotheses may be combined. Any results that may follow upon the further investigation of these points cannot appreciably affect the general arrangement upon which the treatment of the grammar in this article is based.

<sup>1</sup> As such I would suggest the Anuṣṭubh-Pañkti hymns of book v., and the Virāj hymns of book vii.

<sup>2</sup> As such, the sections 1, 10-12, 20, 34, 58, 82, are suggested to me by the detailed examination of Professor Hopkins's paper.

	Early.	Late.	Proportion.
ii.-vii. A	491	90	15
	362	168	32
	853	258	23
viii. A	804	91	23
	40	19	32
	844	110	24

§ 34. The Sāman poetry of i. 1-50, viii., ix. has not evoked any great interest amongst students of the Veda : many of whom perhaps sympathize with Lanman when he writes "we can hardly say that hook ix. is not antique, *despite its wearisome character.*" But if it be, as most writers have assumed, a disgrace to a hymn to belong to a late age, some little sympathy must be felt for these poems (assigned in turn to the ago of the Brāhmaṇas, to that of the Atharvaveda, and lastly to the end rather than to the beginning of the Rigveda), if after all the only true complaint against them is the incessant repetition in which earnestness is not equalled by artistic sense, and the presence in their company of some few intruders which after all speak with a younger son's voice. And if we are but doing justice to these hymns in attributing to them an antiquity which may be their excuse if not their pride, we are ourselves the gainers. The *dictum* of Bradke<sup>1</sup> that "the majority of the hymns of the Rigveda do not belong to the period of the rise, or even to that of the perfection of the ancient Indian lyric art, but rather to that of its decay," an opinion accepted by Brunnhofer as "beyond question," will need to be reconsidered : and the more attractive view which Bradke rejects, that the oldest hymns belong to a period not far removed from the time of the first separation of Indians and Iranians, may again seem worthy of attention.

§ 35. That a close relationship exists between hook viii. and the Avesta is the opinion of Professor Hopkins : and the evidence by which he supports it extends not only to the Sāman hymns of i., ix., x. (see the notes on *ūstra*, *ksirū*, *gāthā*, *mesū*, *yahū*, *varīhdī*), and to the *dānastutis* of book viii. (see on *rajatā*), but also to Rik hymns some of which belong in my view to the earliest period (so *prībhurtar* i. 178. 3, *yahū* vii. 15. 11). That the hymns of the Avesta in which these or other words occur are late can hardly be said to be ascertained : on the other hand some stress may be laid upon the existence both in the Avesta and in the Sāman and early Rik of the consecutive vowels *aa*,<sup>2</sup> afterwards combined as *ā* in accordance with one of the most surely established general tendencies of the language. But whether this special relation he attributed to the position of the respective writers in respect of time or of place, it must be of great importance, if its truth is established, to the understanding of the Rigveda.

§ 36. It remains for me to state the evidence upon which I rest the arrangement of which I have sketched the general principles, and which is based upon the triple argument of vocabulary, flexion, and metre. Of these arguments those of vocabulary and metre have proved the most useful in establishing the

<sup>1</sup> *Noun-Inflection*, p. 580 : the italics are mine.

<sup>2</sup> *Dyaus Asura*, etc., Halle, 1885, p. 2.

<sup>3</sup> *Urgeschichte der Arier*, XIII.

<sup>4</sup> See Hopkins, *JAOS.* xvii. 91.

order : but that of flexion will I think be generally accepted as most convincing by way of confirmation. To this argument therefore I would now exclusively direct attention<sup>1</sup>, as proving conclusively that, if the hymns included in the lists C<sub>1</sub>, C<sub>2</sub>, and in the Atharvaveda are on the whole later than the rest of the Rig-veda, then the six groups represent generally the product of six successive epochs.

§ 37. It is, I believe, desirable to use as criteria of date only those forms which are used with reasonable frequency: this being provided for, it is impossible to use too many: for the higher the number of occurrences, the less is the possibility of accidental differences in the relative frequency of old and late forms. The precise standards to be adopted are of no importance: but it is of great advantage that some standard should be adhered to, and that the impressions of early and late date should thus have objective confirmation.

§ 38. The standards I have followed are as follows:

(a) Criteria of early date. At least 40 occurrences in A, B, B<sub>1</sub>, being 4 times those in C, C<sub>1</sub>, and AV.: or 75, being 3 times as many.

(b) Criteria of late date. At least 20 occurrences in C, C<sub>1</sub>, and AV., being equal in number to those in A, B, and B<sub>1</sub>, or at least 40, being three-quarters of the number in the earlier groups.

(c) These criteria to be so grouped that about 5000 occurrences are in each case taken into account in reckoning the percentage of later forms.

The amount of matter in A, B, and B<sub>1</sub>, together is about twice that in the later hymns. The figures and details correspond to those described in the sections of this article named in the margin. The first six groups include forms already made use of in establishing the order: the last three include the remainder of the material afforded by the body of this article.

On the left-hand side of the following pages are reckoned the occurrences of the criteria of early date: on the right-hand side those of the criteria of late date. The percentages which the latter form of the whole in the respective sections and groups are given on page 234 (§ 41).

<sup>1</sup> I include however now under the heading of 'flexion' a large number of words which in the article in KZ. I treated as isolated, but now see to belong to old or late types respectively: and also the pronouns and adverbs, which also belong to the formal part of language, and are almost entirely independent of the subject-matter.

\*These hymns are however too few to have much importance in determining the *data*: a comparison between the RV. simply and the AV. would give substantially the same results.

§ 30. i.—FIRST GROUP. SOUNDS AND SANDHI.

§		A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	§	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	
61	Gen. pl. - <i>am</i>	885	42	50	8	16	17	02-95	<i>y v</i> consonant.						
78	Other resolutions of <i>d</i> , <i>t</i> , <i>dh</i> , etc.	265	48	63	10	8	6	120-123		198	97	126	52	43	317
92-95	Resolution of <i>y v</i> (regular)	639	204	390	75	45	181	120-130	Ext. Sandhi: <i>i u</i>	66	79	140	126	116	100
108-109	Resolution of <i>r n</i>	148	52	69	6	4	30	138	" "	25	21	43	34	28	109?
126, 127	Hiatus after <i>a d</i>	362	102	153	27	23	97?	137	Int. Sandhi of <i>i u</i> (piryrrhics)	4	7	4	4	4	18?
									7	5	12	2	0	24?	
		1819	568	725	125	90	840			300	202	358	218	190	1666

§ 36. ii.—SECOND GROUP. NOUN-ENDINGS USED BY LANMAN.

§		A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	§	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	
152	- <i>asah</i>	492	173	282	89	22	67	148	- <i>au</i>						
165	- <i>ā</i> (neut. pl.)	616	251	424	110	24	173	152	- <i>āh</i>						
150	- <i>ehāh</i>	262	61	167	36	12	43								
		1864	616	863	225	58	272								

§ 39. iii.—THIRD GROUP. OTHER NOUN-ENDINGS AND NOUN-STEMS.

§		A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	§	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	
145	instr. masc. neut. - <i>ā</i> .....	68	16	33	5	2	0	145	instr. m. n. - <i>ena</i> .....						
146	" fom. " homophonous	108	36	67	14	4	8	181	" fem. - <i>īd</i> , - <i>īyā</i> .....	165	106	108	74	64	579
180	" - <i>ād</i> , - <i>ād</i> .....	46	18	14	5	8				23	7	11	8	3	
181	" fem. s. - <i>ī</i> .....	76	21	30	6	3		198	forms in - <i>yāi</i> , etc. .....	85	63	121	36	39	406
184-186	cases in - <i>yāh</i> , - <i>āyh</i> .....	126	45	62	12	4	3								
187	locative in - <i>ā</i> .....	49	15	37	4	1									
250	- <i>ān</i> : n. a. pl. - <i>ā</i> , - <i>ā</i> .....	53	23	35	2	1									
265	vocative - <i>yāh</i> , - <i>māh</i> .....	105	29	32	4	--		290	transition ac-to cc .....	12	3	12	7	9	42
266	nāgādānt, mid. cases .....	17	2	7	--	--		"	others to <i>ā</i> - .....	5	5	7	11	6	72
288	Vedic root-stems .....	214	66	86	13	7	19								
289	" forms of <i>māh</i> .....	129	42	56	3	1	8	298	<i>anta</i> , etc. .....	9	1	1	3	23	
304	participials in - <i>ātā</i> .....	21	5	14	2	--	6	302	<i>ātāv</i> , etc. .....	9	1	9	2	5	
		60	31	41	6	--									
		1072	385	514	76	19	74								
															329 168 259 136 132 122

Edward Vernon Arnold,

[1897.]

#### § 39. iv.—FOURTH GROUP. VERBAL FLEXION.

§ 33. v.—Fifth Group: CONGREGATIONALISTS.

## § 39. vi.—Sixth Group. PRONOUNS, ADVERBS, AND PARTICLES.

§		A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	§	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV						
433	<i>tyd, tyd</i>			112	88	44	4	3	2	433	ena				22	14	19	15	20	203
											etid (form)				6	6	4	13	3	57
											adis				11	6	12	9	14	137
											sdruv ' all'				7	3	5	7	18	447
											bahū				7	3	6	13	6	85
											dāhara, etc.				4	7	6	10	5	67
											vātora				4	1	22	17	15	96
											paramā				15	18	26	12	4	59
											prathānd				80	42	67	29	18	82
											snād				9	4	9	16	5	13
											sāyān				1	1	1	2	19	
											uccih, etc.				2	1	3	4	1	17
											kītird, etc.				6	3	11	5	1	76
439	<i>cld</i>			329	106	145	38	21	16		adhistāf, etc.				8	2	17	7	6	35
	<i>im, sim</i>			95	54	91	20	2	2		Adverbs in -sāh-				84	84	71	89	43	251
440	<i>tmndā</i>			35	7	16	2	-	1		sahid				14	7	17	5	17	118
	<i>scld</i>			67	16	16	3	--	--		440				23	20	37	23	25	166
	<i>drvth, bahūdā</i>			20	8	3	--	--	--		441				6	3	11	5	1	76
443	<i>makṣū</i>			25	7	--	--	--	--		446				8	2	17	7	6	35
											448				14	7	17	5	17	
											449				14	7	17	5	17	
449	<i>itthā</i>			44	7	12	2	2	4		itthā, dāhā u				23	20	37	23	25	
	<i>dhā</i>			107	22	48	16	5	16		449				7	-	2	2	3	36
453	Adverbs in -vat			41	11	15	-	1	3		tāthā				8	8	6	11	7	91
456	<i>tū</i>			34	11	8	2	-	2		457				8	2	5	5	6	112
											vat				41	34	42	16	17	287
											endm				16	7	11	9	1	66
											iti				16	7	11	9	9	85
														898	275	393	81	34	46	
																			359 215 402 203 245 2494	

### § 39. vii.—SEVENTH GROUP. SOUNDS, SANDHI, NOUN-FLEXION AND -STEMS, VERB-FLEXION.

	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	ĀV	§		A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	ĀV	
111	<i>l<sup>h</sup></i>	225	74	144	40	23	78	78-33	Exceptional consonantal values of <i>y v</i>	18	24	12	21	244	
135	Internal hiatus: <i>a</i> , <i>ā</i> , <i>t</i> , <i>u</i> (end of pyrrhies)	49	3	9	1	1	96	Forūn <i>dīgṛī</i> ( <i>y</i> cons.)	11	13	18	9	1	41	
187	"	41	3	15	9	3	2	- <i>bhyah</i> after heavy syll.	49	23	45	16	25	160	
							97	- <i>gam</i> loc. f. <i>s.</i>	7	3	13	4	3	73	
							112	? (six exceptions)	23	9	21	3	7	169	
							113	<i>s</i>	21	7	15	5	3	33	
							114	<i>t</i> , <i>nt</i>	7	1	8	5	6	40	
							115	<i>d</i> , <i>nd</i>	16	4	21	10	14	125	
							117	<i>sf</i> , <i>ʃh</i>	9	4	5	5	3	37	
							131	External Sandhi: <i>āh</i> , <i>a</i> with dissimilar vowel	26	13	22	10	13	42?	
							136	Internal Sandhi: <i>āt</i> , <i>a</i> with dissimilar stems: suffixal forms	3	5	13	2	1	18	
							201	polysyll. forms: <i>sys</i> , etc.	24	19	37	3	16	39	
							198	polysyll. f. stems... 203-205	38	13	42	24	10	167	
							208	polysyll. fem. f. stems... 222	8	2	5	3	8	68	
							222	<i>dīram</i> ... 254	25	5	30	13	11	59	
							236	<i>-mūn</i> , <i>-yññ</i> , <i>-zn</i> stems: syn. coped forms	25	5	5	6	1	84	
							249	loc. sing. etc., <i>-an</i>	274	15	5	13	7	69	
							173	loc. <i>tu</i> , etc.	1	1	5	5	1	69	
							129	plur. f. (inc. <i>trī</i> )	279	15	5	13	3	100	
							180	plural <i>kt</i> (inc. <i>trī</i> )	1	1	5	5	2	37	
							203	polysyll. masc. -i stems	290	6	3	5	2	35	
							208	"	281	4	4	2	3	44	
							222	form <i>eqd</i>	283	4	3	15	5	31	
							249	<i>nakīh</i> ...	283	4	3	15	5	31	
							263	<i>asmdka</i> , <i>pusññka</i>	296	47	100	37	45	189	
							300	neuters in <i>-iman</i>	301	7	16	6	9	35	
							302	<i>trudat</i> , etc.	325	4	10	-	6	13	
							308	stems in <i>-ast</i>	327	-	-	2	2	26	
							318	2 pl. - <i>thana</i> , - <i>tana</i> , <i>Subj.</i> in <i>-stē</i> ...	328	-	-	1	5	16	
							329	impv. <i>-hi</i> omitted (in certain cases)	329	5	-	5	-	4	
							343	augment <i>d</i>	330	5	-	5	-	4	
							344	<i>didi</i> , etc.	331	-	-	-	-	86	
							364	gerundives in <i>-enia</i> , <i>-eya</i> , etc.	332	-	-	-	-	-	
1253	491	786	186												462
															226 510.215:223 1990

### §§ 30. viii.—Eighty Group. CONJUGATIONAL SYSTEM.

§	A B <sub>1</sub> B <sub>2</sub> C <sub>1</sub> C <sub>2</sub> AV					A B <sub>1</sub> B <sub>2</sub> C <sub>1</sub> C <sub>2</sub> AV							
	280	66	127	30	14	31	372	Passives: <i>ya-</i> stems . . . . .	69	70	28	22	265
377	Vedic root-stems . . . . .	16	11	14	2	1	1	-cha class . . . . .	112	69	70	28	22
388	stem <i>tyer-</i> . . . . .	32	20	28	5	2	11	- <i>ya</i> class (incl. pass.) . . . . .	128	38	121	41	218
"	<i>bhira</i> (simple verb) . . . . .	26	11	14	5	—	1	-stem <i>t-</i> . . . . .	250	129	270	93	468
"	<i>hved-</i> . . . . .	103	13	39	2	—	14	" <i>ghimā-</i> . . . . .	201	102	191	109	466
"	" <i>haia</i> . . . . .	341	104	149	38	16	68	" " <i>bbhutar-</i> . . . . .	31	14	41	17	44
893	Improper subjunctionive . . . . .	120	36	42	7	4	16	" " <i>mánya-</i> . . . . .	20	14	17	5	38
401	Aorist middle: subj., opt., impv. . . . .	218	61	87	24	17	36	" " <i>han-</i> . . . . .	75	34	44	12	104
402	Aorist middle: augtd. . . . .	68	28	42	2	2	3	Desideratives (six excepted) . . . . .	31	11	36	7	15
"	" passive: augtd. . . . .	103	87	68	22	4	18	Causatives proper . . . . .	177	127	183	89	851
413	Moods of the perfect . . . . .	45	25	43	9	6	11	Causatives in <i>p</i> (incl. aor.) . . . . .	4	5	9	8	46
416	Middle intensive . . . . .	143	83	100	20	8	46						
426	Denominative participles . . . . .	1445	405	738	166	70	256						
													1033 543 091 363 338 2116

## § 39. ix.—NINTH GROUP. PRONOUNS, ADVERBS, AND PARTICLES.

S	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	S	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV		
436	<i>úpara, upamád</i>	23	12	19	5	1	5	433	<i>esá</i>	10	10	15	7	11	60
								435	<i>katárd, etc.</i>	6	1	6	3	8	49
								436	<i>ávara</i>	8	3	15	2	8	30
									<i>ávara</i>	10	8	14	12	2	18
439	<i>id.</i>	338	89	207	90	25	76	439	<i>dúrdm</i>	8	1	2	2	2	16
"	<i>nindm</i>	65	18	18	7	2	2	"	<i>paráh</i>	11	6	7	11	8	32
447	Adverbs in - <i>tra</i> (incl. <i>sátrá</i> )	73	17	27	8	4	6	"	<i>pítar</i>	19	7	8	15	31	71
450	stidū and compounds	42	5	10	...	8		"	<i>píthát</i>	4	1	5	4	-	17
								"	<i>bahil</i>	-	-	-	-	-	14
								440	<i>amá, etc.</i>	6	3	6	4	3	35
								"	<i>dirá</i>	12	4	4	3	2	15
								"	<i>perá</i>	21	10	18	6	13	107
								441	<i>adhardi, etc.</i>	10	2	3	4	8	44
								447	adverbs in - <i>tra, tra</i>	62	37	50	44	47	152
								448	<i>ihá</i>	97	38	73	33	26	200
								449	<i>yáthá</i>	113	31	44	15	28	181
								450	<i>wádi</i>	23	14	13	4	10	55
								452	adverbs in - <i>phi</i>	6	-	6	6	-	14
								453	<i>dri</i>	83	9	28	20	14	77
455	<i>siú</i>	120	23	53	24	6	14								
456	<i>ghá</i>	40	7	15	10	-	3								
"	<i>sma</i>		62	11	21	7	6	13							
457	<i>ní</i> 'as'		628	216	321	33	9	18							
458	<i>déha</i>		53	23	24	5	1	14							
		1443	419	715	189	54	159								
														484	180, 370, 195, 214, 1187

§ 40. Of these nine groups the first six represent the criteria used in establishing the arrangement:<sup>1</sup> they include over 30,000 occurrences, and the table that follows (§ 41) indicates that the same conclusions can be drawn from the whole or from any sufficient part: that is, the evidence is consistent. If we confine our attention to single forms, or to small groups of them, this consistency will not in all cases be found: but the explanation of this is to be found in the history of such individual forms, and not in any different arrangement of the material of the Rigveda. Having the evidence of the main current of linguistic change, the eddies must be studied in subordination to it.

The three last groups<sup>2</sup> represent entirely new material. They include over 20,000 occurrences, in which change is perhaps of a less striking character than in those previously collected, and which perhaps have a greater evidential value for that reason.<sup>3</sup> This evidence is not only absolutely in the same direction as that of the other groups, but also fully as clear and distinct, and cannot lightly be set aside.

§ 41. The following table shews, first the number of occurrences of all the forms, early and late, included under each of the nine groups just described: secondly, the number of late forms in each section of the Rigveda in every hundred forms of both kinds. Thus the figure 25 denotes that in every hundred forms 75 are early, 25 late.

#### GRAMMATICAL EVIDENCE OF DATE.

Group.	Old Criteria.						New Criteria.			Total.
	I	II	III	IV	V	VI	VII	VIII	IX	
Number of occurrences	6400	7250	4450	6225	3625	5700	6050	8800	5800	54,560
Proportion of later forms in	A	14	86	23	21	31	28	26	42	28
	B <sub>1</sub>	29	44	35	37	36	44	32	52	39
	B <sub>2</sub>	80	[41]	41	58	47	50	89	57	84
	C <sub>1</sub>	64	56	63	78	70	74	58	69	51
	C <sub>2</sub>	88	77	87	84	80	88	72	81	80
	A.V.	88	86	94	89	82	98	90	88	89

§ 42. In this table there appears only one discrepancy, viz., as to the relative date suggested for the periods B, B, by the criteria first used by Lanman. As these criteria are of special interest, they will repay further investigation: although as evidence the indications they give cannot in this point weigh against the much greater and more complex mass of evidence which points in the

<sup>1</sup> Many of them only in part.

<sup>2</sup> With trivial exceptions due to a difference of classification.

<sup>3</sup> So Hopkins, JAOS. xvii., p. 26, note 8.

other direction. I therefore give the full details as to the relative growth of the later form in each of the four pairs.<sup>1</sup>

§ 43. Form -au. This is so rare<sup>2</sup>

in A B, B, that the precise number of occurrences is of little importance. 5 are found in B,, 12 in B,, so that in proportion to the amount of matter these forms are more common in B.,

§ 44. Forms -āh, -āni. These forms are practically about equally common in B, and B.,

Period.	-au	-āh	-āni	-āih
A	1	62	32	54
B,	1	[70]	36	[61]
B,	3	69	38	[52]
C, <sup>3</sup>	23	75	43	61
C, <sup>4</sup>	29	89	51	68
AV	60	95	63	84

§ 45. Form in -āih. This is least common in B,, and equally common in B, and C,. Its progress is clearly no indication of date till we reach the period C,. In other words, both in B, and C, the form -ebhīh is found in almost half the occurrences, and more often in B, than in A, and in C, as often as in B,. This result is the more striking because -ebhīh is favoured by the Tristubh metre, which is almost exclusively used in B,. Professor Hopkins (p. 26) suggests that "the strongly marked forms continue to be used for show." This is in itself by no means improbable, but it is not easy to form a consistent theory upon this basis. If the poets of C, desired archaic effect, why did they admit the striking neoterism of the dual in -au so frequently, and why does the neuter in -āni continue to spread? The unaugmented past tenses are perhaps the most obvious of all archaisms: yet the poets both of B, and C, leave them little used.<sup>4</sup> The facts seem rather to point to another explanation. The decadent form becomes for a time more common, if it is the longer form. The lengthened forms -au, -āni, and the augmented past tenses shew an uninterrupted progress: the forms -āh, -āih which are shorter than their rivals, suffer a temporary set-back. In short the general tendency towards the lengthening of flexional forms, of which ample evidence will be given in the body of this article, outweighed for a time the special tendencies of the cases in question.

§ 46. All historical investigation of grammar sets up as its ideal the ascertainment of the earliest forms. The words 'early' and 'late' are used by students of the Rigveda in a sense which may easily lead to misapprehension. For instance, the forms in -au and -āni are, as we have every reason to suppose, later variations upon an earlier -ā in each case: for in the earliest hymns we find the 'late' form rare or comparatively rare, and its growth is continuous. But as to the forms -āh, -āih we have no such assurance. There is nowhere any body of hymns in which these forms are not more common than their rivals: and it is per-

<sup>1</sup> These are taken from KZ. xxxiv., pp. 304, 335.

<sup>2</sup> Occurrences of āv before vowels, which are regular throughout the RV., are not taken into account.

<sup>3</sup> This would lead us also to expect to find -āsah most often in B,, which again is not the case.

<sup>4</sup> See below §§ 337-340, 409-411.

fectly possible and by no means unlikely that these forms are respectively as old as or older than the rivals which have failed to destroy them. In the struggle for existence as found in language it is not always the more youthful competitor that wins, nor does every chance variation lead to a new development. In such cases as these the term "late" refers only to a limited period, and means that towards the end of the period of the Rigveda the rival form was yielding ground, and beginning to be regarded as an archaism as compared with the other. It is a principal part of the purpose of the main part of this article to fix the limits within which such changes are at work.

§ 47. The difficulty of distinguishing permanent tendencies from temporary variations has made necessary the extensive range of this article, and has imposed upon it corresponding limitations in accuracy and fulness of detail. It leaves the ground open for special investigations into the separate phenomena that are referred to: and in abstaining from any division according to date of the whole earlier half of the Rigveda, it by no means implies that such division may not yet be made: nor does it exclude the hypothesis that in books ii.-vii. there may be a nucleus of the most ancient verse of all.<sup>1</sup> Nor again, does the treatment of the AV. as a whole exclude a distinction of earlier and later hymns within its limits: but on the contrary the path is pointed out along which such discrimination can be made. I seek to give an outline map of the country which borders on either side the straits that separate the Vedas of Rik and Atharvan, and I hope to make the exploration of the regions beyond more easy to those that follow. That this outline map will itself come to need correction in many points goes without saying.

§ 48. I reserve to the end of this article a short general review of the linguistic development of the Rigveda, as brought to light by this investigation.

§ 49. Acknowledgment. It will be obvious throughout that I have built upon the work of others. I have endeavoured not to repeat information given elsewhere, unless it needed to be supplemented or existed only in a scattered form.

§ 50. Lastly, I wish to express my special sense of gratitude to the American Oriental Society for undertaking the publication of an article of a kind that cannot be of general interest. In so doing it is pursuing a path it has chosen for many years past, and one along which lies the hope of progress for the future.

<sup>1</sup> See above, § 33.

## HISTORICAL VEDIC GRAMMAR.

§ 51. The principal developments of Sanskrit grammar are known to us through Vedic literature in the wider sense, the succession of Rigveda, Atharvaveda, Brāhmaṇas, Sūtras and Upaniṣads, as leading up to epic and classical literature. They are treated historically in Whitney's Grammar, and with the assistance of figures by which changes is numerically valued.

§ 52. The present article endeavours to carry back this history some stages further. We have no absolute standard of date distinguishing the earlier and later part of the Rigveda: but it has been put forward in the Introduction to this Article that we have a large body of harmonious evidence in favour of a certain arrangement of those parts: and chiefly that such an arrangement gives a history of grammar which naturally leads up to the history we know already. It remains to ascertain how far the detailed consideration of grammatical points harmonizes with this general view.

§ 53. The literary periods of the Rig and Atharvavedas mentioned in the Introduction will now be referred to shortly as A, B<sub>1</sub>, B<sub>2</sub>, C<sub>1</sub>, C<sub>2</sub>, AV. The symbol B will be used for the periods B<sub>1</sub> and B<sub>2</sub> taken together: and C for the periods C<sub>1</sub>, C<sub>2</sub> and AV, taken together. It would not yet be safe to say that there is a greater interval of time between the periods A and B<sub>1</sub> than there is between B<sub>1</sub> and B<sub>2</sub>, or between B<sub>2</sub> and C<sub>1</sub>, than between the later periods. But for our present purpose a division into a smaller number of periods than six is urgently necessary. In many grammatical details the whole number of occurrences is so small that it is impossible to attach any importance to the number found in one of the shorter periods. In all cases it is difficult to make numerical comparisons where the amounts of matter from which instances are drawn vary considerably. By fixing our attention in the main upon three larger periods A-B-C, in which the amount of matter is approximately equal, we shall in most cases see at once from the number of occurrences in which direction the trend of the language lies. The more detailed information will be given in the tables.

## CHAPTER I. SOUNDS AND SANDHI. §§ 54-144.

§ 54. Under this heading are included all points in which there is a difference of pronunciation between Vedic and classical Sanskrit. Sometimes this difference is expressed by a change of symbol : more often it is to be inferred from the metre.

§ 55. The question at once arises whether we have a sufficient knowledge of the metre to say positively what pronunciation it requires : whether the number of syllables in each verse is positively fixed, and how often the distinctions of quantity are of importance. To this question only a provisional answer can be given.

§ 56. Catalectic verses of the Gāyatri or Anuṣṭubh type, that is to say, verses of seven syllables, are probably to be found in the Rigveda. As, however, comparatively few rules of resolution convert the great mass of those verses which at first sight seem to have only seven syllables into complete lines of eight, we are justified in using such rules as far as they will carry us. In isolated cases we are not justified in positing a pronunciation which is contrary to that found elsewhere for the same word or ending.

§ 57. In verses of the Trīṣṭubh-Jagati type, and especially in those enclosed in A, there are many instances in which only ten syllables appear : the missing syllable being one that immediately precedes or follows the caesura. In these cases it is not usually possible to restore the missing syllable by the use of general rules : and the variation seems therefore to be metrical. In some instances, however, restoration is sufficiently probable upon lines suggested by verses of the Gāyatri-Anuṣṭubh type.

§ 58. All the Vedic metres shew a well-marked rhythm, or succession of short and long syllables, running through the whole verse. Only in the case of the first and third syllable in each verse is the quantity indifferent. There are two or three types to each of the standard metres, and deviations from these types are permitted to a limited extent : but on the whole the rhythm gives us abundant evidence of the quantity of all syllables, and quite independently of the record of the Pada and Sanhita texts, though generally in agreement with the latter. For this reason all references to the Rigveda are made to the Sanhita text only.

§ 59. We proceed to consider first vowel-values, in which are included the "resolutions" of the vowels ā ī ū, and the vowel values frequently to be given to y v r n : and next the occurrences of certain consonants, notably l ḥ l and the linguals t̄h d̄h n̄ s.

## A. i. Resolved vowel-values.

§ 60. That the disyllabic values of ā ī ū, etc., are not to any appreciable extent due to metre is shewn by their appearance in

certain parts only of the word-system: for these resolutions, parallels are often to be found in the Avestan Gāthās.<sup>1</sup>

§ 61. In the gen. pl. of all declensions *ā* is frequently to be read as *aa*. This form, which we need not doubt to be the earlier one, is favoured by a metre in which verses of 8 or 12 syllables prevail, and therefore might be expected more often in A than in B or C, though not in so large a ratio as actually appears. It is not rightly explained away by a theory of catalectic verses, and there are a sufficient number of occurrences which are not at the end of the verse at all. The decay of this form is most marked in B<sub>2</sub>, in which period occurrences are much more favoured by the metre than in B<sub>1</sub>, and yet are relatively much rarer.<sup>2</sup>

§ 62. The resolution of *ā* elsewhere than in the gen. pl. is by no means uncommon up to the end of period B. That of *i* or *ū* is less common. It is hard to trace phenomena of this type in AV., owing to the prevalent disorder in the metre: but the occurrences, if any, must be very few. Resolutions at the end of the first part of a compound are treated below: see 'internal Sandhi,' §§ 135-140.

§ 63. In the declension of nouns resolution of *ā* occurs frequently in the case of stems in radical -ā -a, in the nom. acc. m. f. of all numbers. The antiquity of the formation is shewn by the absence of resolution in acc. fem. pl. of -ā nouns. Instances are collected from Grassmann by Lanman, pp. 443, 446, 449-452, to which add *girīsthāah* (nom.) ix. 18. 1. I quote the stems only: *kṣet* 5, *r̥bhukṣā*: *guā* 7: *jā*, *jīspāti*, *aljīt*, *navāj*: *r̥tajñā*: *dr̥vīṇodā* 2 (*vasudā* 2 in AV.): *gopā* 3 (and AV. 1), *īndrvgopā*, *svagopā* 2, *tanūpā* 2, *pacupā*: *kakṣiaprī* 2, *r̥athaprī*: *evayā*: *kṣetrāśā*: *girīsthā* 5, *pathēsthā*, *parīsthā*, *rathēsthā*: in all, 43 exx. in RV.; 3 in AV.<sup>3</sup>

§ 64. Also in the conjugation of verbs in radical -ā: *gaat* (*gā* 'go'): *duam daah* 2, *daat* 2 (*dā* 'give'): *dhaah* (vi. 19. 10), *dhuama* (*dhā* 'put'): *paanti* 7, *paat*, *paantu*, *paántam* 4 (1 *pā* 'protect'): *paah*, *paíntam* (2 *pā* 'drink'): *praah*: *bhaasi*, *bhuanti*: *asthaat* 4: 30 exx., of which 25 are in period A.<sup>4</sup>

§ 65. Also in radical syllables before s, often perhaps from a primitive -as suffix: *kāasthā* 2; *dāasvat* 7, *suddāh* 5: *daasā* 3, *dāasa* 9, *daívodaasa*: *dhaasi*: *násatyā* 61, *īndranaasatyā*: *puastiā* (iv. 21. 6): *bhāah* 5, *bhāasvat* 3: *raaspinā*, *raaspirā*: 101 exx., all in A or B.<sup>2</sup>

§ 66. Many other possible resolutions are suggested or referred to by Lanman (*passim*), Grassmann, and Oldenberg (pp. 163-190). Before accepting these as even probable it is specially necessary to consider (i.) whether the metrical difficulty can be met by any other resolution; (ii.) whether the irregularity may not be due to the presence of deessyllabic Trisūnbh verses or other metrical variants; (iii.) whether the metre of the hymn in question is not generally disordered. The resolution of the vowel can only be considered as a reasonable explanation where

<sup>1</sup> Hopkins, p. 91.

<sup>2</sup> See Table § 73.

such resolution is suggested in some fair proportion of the total number of occurrences of the root or other element in question, or is supported by analogy or other evidence: and for this reason cannot be accepted as probable in the gen. sing. in *-sya*, instr. sing. in *-ā*, in any part of the *-ā* declension,<sup>1</sup> in the participial suffix *-āna*, or in the particles *ā*, *mā*, *vā*. In the following cases it seems to me probable: *duagvāh* 3, *dudāagvāh*, *dvānāokah*, *vātā* 'wind' 10, *vāar* 'water' 3, *vāur* 'protector'; *gāam* (or *gāvum*) acc. s. 6, *gāah* (or *gāvah*) nom. pl.; *dyāum* (or *dyāvum*) 5, AV. 1?; *pānthaam* 3, *pānthaah*: *mādām* 'me' 10, *vāām* 'yon' 9: *akṣauh* (aorist of *kṣar*) 4: in all, 58 exx., of which 39 are in A. No examples are noted in AV. by Whitney to my knowledge, but there is one doubtful case as above.<sup>2</sup>

§ 67. The abl. sing. in *-āt* appears to be resolved in six cases, all neuters (Lanman, pp. 337, 8). Two of these are from root-nouns, *antūrikṣa*, *sadhāstha*. But in no other point do the neuter root-nouns differ in declension from derivative nouns in *-a*. This resolution is therefore not established. See also §§ 166, 172.

§ 68. Resolution of *i* appears only in *kiistā* 'poet' 2: *siirā* 'stream' 2: it is possible also in *vīrā* 'man' 2 (vi. 21. 6, 8), *vīria* 'heroic deed' (i. 61. 14). All the exx. are in A: those given by Oldenberg, p. 187, for *gīh*, *gīrbhāh*, *gīrvāhah* seem very doubtful.<sup>3</sup>

§ 69. Resolution of *ii* in root-syllables is more common: we note *duuri* (*davarā*) 'distant' 2, iv. 20. 1; x. 108. 11; *nūn* (not two words, as Grassmann) i. 64. 15; iv. 16. 21; v. 10. 6; v. 16. 5; v. 17. 5; v. 52. 15; v. 74. 6; vi. 68. 8; vii. 62. 6; vii. 93. 8; vii. 100. 1, giving 11 certain examples: *nūntana*: *puuīh* 'stronghold' i. 189. 2; vii. 15. 14; *puuṛbhīh*, i. 58. 8; *puuṣṇ* 2, *puuṣṭi*: *bhuut* 4, i. 77. 3; 173. 8; iv. 43. 4; x. 48. 0; *bhuutā*. *bhuuntū*, i. 94. 12; *ciura* 3: *ciusū*: *ciura* i. 71. 0; 122. 15; 146. 3; vi. 51. 2; ix. 111. 1; in all, 35 exx., of which 28 are in A'. In *sāria*, *spūrdhān* resolution is doubtful<sup>4</sup>: for *suuktū*, etc., see below under internal Sandhi, § 136.

§ 70. The symbol *e* frequently represents two syllables in superlatives: *jyēṣṭha* 21, *dēṣṭha*, *dhēṣṭha* 3, *prēṣṭha* 13, *yēṣṭha* 3, and *grēṣṭha* 9: in these cases the combination *ayi* fairly suggests the probable pronunciation. A similar resolution seems certain in *tredhā* 9 (and AV. 2), *desñā* 5, *crēni* 6 (always) and *crēnidān*, *grenigāh* 2: and probable in the following cases: *deyām* (*dāiyām*), *devā* v. 50. 2; vii. 46. 1; 66. 2; *dheyām* 2, *nēsam* x. 81. 4; *nesi* i. 129. 5; *netār* 4, *netri* 2, *āneūr*, *pranetūr* 3 (adding viii. 19. 37), *mādema* vi. 4. 8; 10. 7 and frequently in refrains, *reknah* vii. 40. 2; viii. 46. 15<sup>5</sup>; *vēh* i. 77. 2; *vēh* i. 130. 3; vi. 48. 17.<sup>6</sup> Two-thirds of the instances are in period A.

<sup>1</sup> To Oldenberg's instances, p. 173, add i. 175. 4 (?)   <sup>2</sup> See Table § 73.

<sup>3</sup> Doubtful are i. 126. 2; vii. 7. 7.

<sup>4</sup> See below § 166.

<sup>5</sup> But see below § 169.

<sup>6</sup> More doubtful are *taret* vi. 69. 5; *te* (*tāva*) i. 173. 12; *dhūrlēh* i. 128. 7 bis; *siddhreh* v. 44. 10; *hurema* i. 127. 2.

<sup>7</sup> See, however, § 154.

§ 71. Resolution of *o* is probable in some cases, but is rare : *ōmātrā*, *kṣoni* 2, *gōḥ* 3, *maghónah* gen. sing. 2, *maghónoh* gen. dn., *maghónih* nom. pl. fem. vi. 65. 3.<sup>1</sup>

§ 72. Resolution of *ai*, *au*, *ṝ* is probable as follows : *asmai* iii. 13. 1; v. 33. 1; viii. 2. 41; 31. 2; *augāná* x. 30. 0; *kṣnaumi* x. 23. 2; *naúḥ* v. 59. 2; *āsturū* x. 105. 11 *bis* and *stauná* vi. 66. 5; *nr̄n* 2. See also § 156.

§ 73. Table shewing instances of resolution of *ā i û*, etc.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
	Resolution of <i>ā</i> :								
61	Genitive plural - <i>aam</i>	385	42	50	92	8	10	17	35
63	Nouns in radical -ā ( <i>a</i> )	28	5	9	14	..	1	3	4
64	Verbs in radical -ā	25	3	2	5	..	..	..	0
65	Radical syllables before -s	63	12	20	38	..	..	..	0
66	Other instances	39	9	4	13	1	5	1	7
68	Resolution of <i>i</i> :	7	..	..	0	..	..	..	0
69	Resolution of <i>û</i> :	28	3	8	0	1	..	..	1
70	Resolution of <i>e</i> :	63	11	15	20	7	2	2	11
71	Resolution of <i>o</i> :	7	2	..	2	1	..	..	1
72	Resolution of <i>ai</i> , <i>au</i> , <i>ṝ</i>	5	3	4	7	..	..	..	0
	All, except gen. pl.	263	48	63	111	10	8	0	24

§ 74. Many final vowels regularly short in classical Sanskrit are frequently long in RV., and are so written in the Sanhita. That the lengthening is not purely metrical has been clearly shewn by Oldenberg, *Prol.* pp. 393–423: we have therefore to deal with the shortening of vowels originally long. The quantity of the vowel seems however to be much influenced by metrical position. Benfey's collections in the *Abhandlungen der kgl. Gesellschaft der Wissenschaften zu Göttingen*, Band xix. (1874) to Band xxvii. (1881), are not at present accessible to me; and I know of no similar collection for the Atharvaveda. So far as my own investigations have gone, it appears that the variant long vowel is found in all parts of the Rigveda. There is a similar “lengthening” at the end of the prior elements in compounds.

#### A. ii. Resolution of *y* and *v*.

§ 75. The native grammarians give a general permission to reckon *y v* as vocalio (in which cases we may conveniently write either *i u*, or conformably to the laws of classical Sanskrit *iy uv*), wherever the metre so requires. In reality this option exists only in a limited number of words and forms: it is far more common with *y* than with *v*, and is perhaps also found with *r n* from time to time: and it is rapidly dying out in the Vedio period. The general conditions have been laid down by A. H. Edgren (JAOS. xi. 1885).

<sup>1</sup> See Table § 73. More doubtful are *kṣodāḥ* vi. 17. 12; *yódhlyas*, i. 173. 5; *stóma* ii. 11, 3; vi. 24. 7; *Vāl.* 4. 4; *stóṣam* i. 187. 1.

§ 76. Comparing Vedic with classical Sanskrit, it appears that in the earlier language vocalic *y v* (*iy, uv*) were found in many cases where the later language has the consonantal value. We may reasonably suppose the vocalic value to be primitive wherever it prevails in the earliest period. Where it is exceptional at all times, it is seldom possible to be sure of its origin; but in certain cases we shall find strong reason to think the consonantal value primitive, the vocalic secondary and either transient or passing to *iy, uv* in classical Sanskrit.

§ 77. It is necessary for our present purpose to classify according to the relative frequency of vocalic and consonantal values. The following table will be useful for reference. The references are to the following sections.

#### Radical *y v.*

<i>dhvat, ahve</i>	§ 96g	<i>tva</i>	§ 78	<i>ṛvi 'go'</i>	§ 78
<i>ṛvi 'go'</i>	83	<i>tva</i> -in composition	93	<i>ṛvān</i>	83
<i>rvij</i>	83	<i>trvijfar</i>	83	<i>ṛsi 'bind'</i>	96c
<i>kva</i>	78	<i>didi-</i>	78	<i>suvind</i>	83
<i>gārvūti</i>	83	<i>dīdhi-</i>	78	<i>syā-</i>	83
<i>jyād 'strength'</i>	83	<i>dyām</i>	83	<i>syond</i>	78
<i>jyād 'bow'</i>	92	<i>vdyut</i>	83	<i>svrī 'his'</i>	96f
<i>jyākā</i>	92	<i>dyūn</i>	83	<i>svad</i>	83
<i>jyāyas</i>	83	<i>dyaih</i>	96a	<i>svār 'heaven'</i>	78
<i>jyeṣṭha</i>	83	<i>dvā</i>	92	<i>svargā</i>	78
<i>jyōk</i>	78	<i>vdhānv</i>	96b	<i>svāhā</i>	83
<i>tyā</i>	83	<i>pīt</i>	78	<i>svid</i>	83
<i>tva 'many'</i>	96e	<i>bibhi-</i>	83	<i>hīyāni</i>	83
<i>tva 'thou,' tved,</i>		<i>bhyisam</i>	83	<i>vih</i>	96g
<i>tvām, tve</i>	93	<i>mīni-</i>	83		
<i>tvāyū, tvit, tvā</i>	83	<i>mēni-</i>	78		

#### Suffixal *y v* in nouns.

<i>-dyya</i>	§ 80	<i>-ya</i> after light syl-	<i>-vana</i>	§ 85
<i>-itva</i>	85	<i>lables</i>	<i>vani</i>	85
<i>-enya</i>	80	<i>-ya</i> after heavy syl-	<i>vant</i>	85
<i>-tyā</i>	78	<i>lables</i>	<i>vāra, -vala</i>	85
<i>-tyā</i>	80, 84, 94	<i>daiyya</i>	<i>vari</i>	85
<i>-tyā</i>	85	<i>santya</i>	<i>vas</i>	85
<i>-tra subst.</i>	85	<i>stirya</i>	<i>vi, vī</i>	85
<i>-tra adj.</i>	80	<i>-yas</i>	<i>vin</i>	85
<i>-vāna</i>	85	<i>-yu</i>	<i>vyd, vyā-</i>	78
<i>-nya (nya)</i>	80, 84	<i>-va, -vā</i>	<i>-syā</i>	78
<i>-ya, -yd</i>	79	<i>-dāva</i>		
<i>vasavyā</i>	79	<i>tānva</i>		
<i>-ya, -yd, chiefly vocalic in some words</i>	94	<i>-vati</i>		
		<i>-van</i>		
		<i>dhānavan</i>		

#### Suffixal *y v* in verbs.

<i>Absolutives</i>	§ 87	<i>-ya</i> as class and denominative sign	<i>açyām</i>	§ 88
<i>Infinitives in -ityai</i>	87		<i>syām</i>	96d
<i>-dhyai</i>	87	impr. <i>ātva</i> , rt. 2 as.	88	
<i>-nu, -u as class-signs</i>	88	<i>-yā</i> as optative sign.	88	

*Declension of nouns with stems in -i, -I (-ī), -ī, -u, -ū.*

<i>i</i> stems : instrum. -yā after light syll. ....	§ 97	-i stems : gen. loc. du. -yoḥ after light syll. ....	§ 97
instrum. -yā after heavy syll. ....		gen. loc. du. -yoḥ after heavy syll. ....	82
abl. gen. sing., n. v. a. ....		heavy syll. ....	82
pl. -yah ....		pl. -yah ....	86
<i>ī</i> (-ī) stems (Lanman's B class)	§ 97	-ī (-ī) stems : loc. in -yām ....	§ 97
instrum. -yī after light syll. ....		gen. loc. du. -yoḥ after light syll. ....	97
instrum. -yī after heavy syll. ....		rōdasiōḥ ....	97
dat. gen. abl. in -yai, -yāḥ ....		gen. loc. du. -yoḥ after heavy syll. ....	82
<i>I</i> stems (Lanman's C class) ....		§ 81	
<i>u</i> stems : instrum. sing. -vā, masc. and neut. ....	§ 86	-u stems: fem. forms in -vai,	
instrum. sing. -vā, fem. : after light syll. ....		-vāḥ, -vāḥ after heavy syll. ....	82
instrum. sing. -vā, fem. : after heavy syll. ....		dual paçvā ....	86
abl. gen. sing. n. v. a. ....		gen. loc. du. in -voh after light syll. ....	97
pl. in -vah ....	86	gen. loc. du. in -voh after heavy syll. ....	82
fem. forms in -vai, -vāḥ, -vāḥ after light syll. ....	§ 86		
<i>ū</i> stems ....		§ 81	
stem rai ....	§ 86 and note	paty-	§ 86, 97
juny- ....	§ 86	sakhy-	§ 80, 97

*Noun and verb endings :*

-dhva .....	§ 90	-vali .....	§ 90
-dhvati .....	90	-vahē .....	90
-dhve .....	90	-syā .....	89
-dhvai .....	90	-syāḥ .....	89
-bhya, bhyan .....	89	-syai .....	89
-bhyaḥ .....	89, 99	-syāḥ .....	89
-bhyanḥ .....	89	-sva .....	90

Refer throughout to Edgren, *Semivowels*, JAOS. xi. 67-88.

§ 78. In the Rigveda *y* *v* regularly represent or include vocalic sounds in root-syllables in *kūa*, 'where,' *jiśk* 'long,' *tuā* instr., *sionā*, *sūar* 'heaven,' and *suargā*: in forms from 1 vi 'go,' e. g. *viānti*, *viāntā*: and in the participles *dīdiat*, *dīdiāna*: *dīdhīat*, *dīdhīāna*: *pīpiāna*, *pīpiānā*, *mēmitat*: *mēmiāna*.

The exceptions are *kva* i. 38. 2; v. 61. 2 bis; and AV. 2: *jyōk* vi. 28. 3<sup>1</sup> and AV. 2: *svār* AV., 12 times: *svargā* AV., 19 times: *syonā* AV., 29 times: *āvyan* iii. 49. 1.<sup>2</sup> For compounds of *tvā*, see § 93.

§ 79. Also *y* is regularly vocalic in the noun-suffix -ia, -īa.

<sup>1</sup> Yet this is not certain: on the other hand *jyōk* is a possible reading in x. 59. 6.

<sup>2</sup> See Table, § 102.

In the following words this suffix follows a light syllable: *adhavarṇa, apasṭa, aria, aryamīa, asūrīa, ahānīa, ucaṭhīa, udānīa, ṣmaṇīa, kānīa, karmāṇīa, chandasīa, tāvasyā, tīṣīa, doṣāṇīa, dhanāṇīa, naḍhāṇīa, namūṣīa, nahūṣīa, pathīa, parvatīa, pātalyā, puruṣīa, pūṣāṇīa, pradhanīa, prāgavīa, bārhīṣīa, manuṣīa, yamīa, rāthīa, rājāṇīa, lakṣmāṇīa, vāpiṣīa, vayīa, varuṇīa, viduṭhīa, vīcīa, vṛjanīa, vratīa, cāluḍhāṇīa, sapathīa, cāmūṣīa, cīrṣāṇyā, cravasīa, sācūthīa, saḍhāṇīa, saparīa, samāṇīa, sumāṛīa, saḥasīa, sādāṇīa, sāvīa, haviṣyā, hrdayyā.* Several of these are also found in AV., and also āyūṣīa, enāśīa, kūlīa, jaghāṇīa, tīrīa, vacasīyā, dhanāṇīa, pājasiā, pūṣyā, buriṣyā, bhasadyā, mutīa, yajūṣīa, ranīa, vacasīa, varcasīa, tīleyā, srotasīa. Similar words in -īta, -īva, -īśa etc. are pēcātīa (RV.); devatīa (AV.); īrjāvīa, pācāvīa, vusāvīa, garavīa (all RV.); vāyavyā (RV. and AV.); jānitīa, mathāvīa, hanāvīa, hīsītāvīa (AV.); bhūjīyā (AV.).<sup>1</sup>

Of these words *vāyavyā* has *y* consonant 7 times (in A and B), *y* vowel 3 times only. It is therefore an exception, and has perhaps suffered change of accent. Otherwise there are 20 exx. only of *y* consonant in RV., viz. tāvasyā, doṣāṇīa, pātalyā, manuṣyā 1, cīrṣāṇyā 2, saḥasdyā 2, haviṣyā, hrdayyā; kānīa: pācāvīa, vāyavyā, garavīa. Of these 20 exx. 14 are in period C. In the AV. the vocalic value (47 exx.) is only slightly more common than the consonantal (41 exx. in verse passages).<sup>2</sup>

After a heavy syllable there is no example of *y'* consonant in RV., but there are a few in AV.

§ 80. The derivative suffixes -ya, -yū, including -āyya, etc., of all categories, are usually vocalic after heavy syllables. We must however except *santya* which has always *y*: *dāvya, sārya, sūryū*, which shew a much larger proportion of *y* forms in the earlier periods than other words apparently of the same type, are treated separately below, § 95. In almost all cases the proportion of consonantal forms increases in the later periods; but *dāvya* (with *y* consonant) becomes again rare in AV. The gerundives do not differ from other nouns in -ya: and we may also include here the suffixes -tya, -nya (in *dhiṣnya*), and the gerundives in -enya (-enya), and in -tva, which last ending always follows heavy syllables. The gerundives in -tva (*jānitva, sānitva*) have *v* cons.: but *bhāvitvā* shews again the vowel.<sup>3</sup>

To the above rule out of about 1000 instances there are only 65 exceptions altogether noticed in RV., but a much greater number in AV.

The exceptions in Rigveda belong to the following stems: *agdṣtya, aghnyā, ḍevyā* 3 (and *su-ḍevyā*), *ḍyā*, 1 *ārya*, 2 *ārya* 5, *kāvya* 2, *jyāṣṭhyā* 2, *tātīyā* 2, *tārkṣya* 2, *tuchyā* 2, *tīrōahnya*, *dakṣāyya*, *nṛṣāhya*, *pārya*, *pañṣya*, *paurukutsyā*, *mātsya* 2, *vātāpya* 2, *vīcādevya*, *vīra-tāryā* 6, *valcyā*, *cātrutārya*, *suवīryā* 3, *saubhāgya*, *hāṣṭya*, *hotrūtārya*.<sup>4</sup> Gerundives in -ya: *īdyā* 2, *anīndyā*, *anumādya*, *pravdeya*, *vārya* and *rāndya*. In -tya, *asātātyā*, *āptyā*. Gerundives in -enya: *ābhūṣenya*, *diḍkṣenya* 2, *marmṛṣenya*, *saparyenya*:<sup>5</sup> in -tva, *kārtva* 2.

<sup>1</sup> In the above list -ia is written if there is any example of that value, otherwise, as in the texts, -yā. <sup>2</sup> See Table § 102.

<sup>3</sup> *bhāvitvā* ii. 24. 5, not as Grassmann *bhāvitvā*.

<sup>4</sup> *saptid-ṣasyā* 3 is wrongly suggested by Grassmann, the true reading being *saptāśīa*. See Table § 102.

<sup>5</sup> *papṛkṣenya* is suggested unnecessarily by Grassmann.

§ 81. *Y, v* have vocalic value in all forms of nouns of the -*t* class (Lanman's C class, later radical class), and of the -*u* class.

Exceptions are very rare in the Rigveda : *staryām* vii. 69. 8 (see Lanman, p. 379), *nadyāt* vii. 50. 4<sup>1</sup>; *tanvān* viii. 65. 12, *tanvāt* i. 162. 26, x. 51. 2. 4, *camvōt*, ix. 66. 21. But in the AV. 36 such forms are noted, and it is very doubtful whether such forms as appear in the text of the RV. can be successfully removed by emendation.<sup>2</sup>

§ 82. In the instrum. sing. and gen. loc. dual of -*t*, -*t*(-*t*) (Lanman's B class) and of -*u* stems, if a heavy syllable precedes, *y, v* have vocalic value.

There are however only feminine -*u* stems that shew such forms in RV., and the number of examples is very small.

Exceptions: -*t* stems: instrnm. sing., *dk̄tyā* x. 151. 4, *īstyā* x. 169. 2, *devdh̄tyā* x. 63. 11; in AV., nine occurrences. -*t*, (-*t*) stems: instr. s. in AV., three times: *samīcyōt* RV. x. 24. 5, and once in AV. -*u* stems: gen. loc. du. in -*voh*, three times in AV.

In the AV. the vowel forms still greatly preponderate: thus in the instr. sing. there are 93 vowel forms, and only 12 consonantal.<sup>3</sup>

The same rule holds for the AV. for the feminine forms in -*vai*, -*vāh*, -*vām* after heavy syllables: *gvagrūvai* 26, *urvāruvāh*, *prdākuvāh*, *gvagrūvāh*; but *rājvām*. We cannot however trace this rule back to the RV., where there are two forms only, *svdsvāh* and *gvagrūvāin*, each occurring once.

A similar gen. sing. masc. in -*uah* has been conjectured by Lanman in place of *dhr̄snbh* x. 22. 3, and *vīpnoh* viii. 31. 10.

§ 83. In root-syllables and verb-stems, *y v*, in whatever position they occur, have with but few exceptions consonantal value. Thus from root *i* 'go', *yāt*, *yānti*, *yāntu*, etc.: rt. 2. *ci* 'see' *cikyatuh*, *cikyūh*: rt. *ji* 'conquer' *jigyuḥ*. So in the reduplicated verb-stems *pipy-*, *bibhy-*, *mimy-*, *juiv-*; rt. *div* 'shine' in *dyāt*, *dyām*, *dyān*: rt. *svad* 'taste sweet': and the pronoun *tvā-* 'thou,' so far as the forms *tvā* (sec. enclitic), *tvāyā* instr., *tvāt* abl. are concerned.

There are however some exceptions: see § 78 (*kua* 'where', *jiōk*, *tuā* instr., *sionā*, *siār*, *suārga*: rt. 1 *vī* 'go': verb-stems *dūtī*, *dīdhī*, *pēpi*, *mēni*), § 92 (*duā*, *jīt*, *jiākt*): § 93 (*tuāh*, *tuām*, *tuē*), § 96 (nom. s. *dyāuḥ*, rt. *si* 'bind', *tvā* 'many', *svā* 'his own').

Where *tvāṣtar* is trisyllabic, some such form as *tvāṣitar* would best suit the metre, and next to it Grassmann's suggestion *tvāksitar*; not however *tuāṣtar* (as Edgren). We have also to read always *svāñā* from *su* 'press', text *svāñā*.

In *jyēṣṭha* *y* is always consonantal, but see above § 70: and where *dyām* is disyllabic, it is better to resolve *ā*: see above § 66. The words *rtvīj*, *gāvyaūti*, *svdhā*, and *svid*, though apparently

<sup>1</sup> In ix. 9. 4 it is better to read *nadio jinval*.      <sup>2</sup> See Table § 102.  
<sup>3</sup> *acītyā* ii. 18. 6 is wrongly suggested by Grassmann.

compounds, have *v* consonant always, and must for practical purposes be classified with words that have radical *y r*.

In *syá, tyá* vocalization is somewhat more common: but as the whole stem dies out at an early period, we cannot trace its history.

In the instrumental *tráyá* vocalization is rare; in the enclitic *trá* and abl. *tvád* it is progressive, and fairly common in AV.

To Grassmann's lists are to be added: *tudí* 448. 3, 454. 1, 521. 3, 537. 3, 844. 18, 924. 2; *tuá* 191. 10,<sup>1</sup> 370. 3, 390. 5, 532. 4, 653. 8, 669. 16, 707. 7, 711. 18, 760. 3, 873. 8, 911. 22, 963. 7, 966. 6, 984. 5, 986. 5, 987. 5.

Written *iy* is to be read as *y* cons. in *hiyāná* ix. 13. 6; 98. 2, and *bhiyásam* ii. 28. 6; ix. 19. 6.

Isolated exceptions are rare and therefore doubtful: as such are suggested *tánti* x. 26. 1; *iántu* viii. 69. 10; *dítán* v. 86. 5; *dítanáh* viii. 29. 2; *sudítmánam* ii. 4. 1; *guán* 'dog' x. 14. 19, 11; 86. 4; *suádanti* Vál. 2. 5, *suadante* ii. 1. 14: and from *jíd* 'strength' *jídýán* iii. 38. 5; vi. 30. 4; x. 50. 5; *paramajíd* viii. i. 30.<sup>2</sup>

§ 84. The suffixes *-ya*, *-yā*, *-tya*, *-nya*, etc. following light syllables have *y* consonant. There are however many exceptional words, for which see § 94: on the other hand *suntya* has *y* consonant.

Isolated instances to the contrary are few: *ajuríd*, *átila* 7, *áditid* 6, *áriá*, *gárvia* 3 (and *sugdvia*), *áhántia* 2, *ánavia* 2, *bhávita*, *márvia* 4: *kulid*, *pádiá*: *anid* 2, *nípid* 2. Besides these, AV. has two examples: *rávúa*, *vátparjanid*.<sup>3</sup>

§ 85. Consonantal *y v* (especially the latter) is found in numerous noun-suffixes: *-tva*, *-yas*, *-yu*: *-va*, *-vā*, *-vi*, *-vī*, *-vīm*, *-vant*, *-vali*, *-vas* (*váns*), *-vana*, *-vana*, *-vani*, *-vara*, *-vari*, *-vala*, *-vin*: *-tva* substantival; and in the gerundive *-itva*.

There are a few cases of vocalization of *v* in *ágra* 'horse', sometimes in the simple noun, more often in compounds of which the first element ends in *-a*, which combines with the initial *a* of *ágra*. In the latter case the hypothesis of internal hiatus, e. g. *yrá-ágra* (as Grassmann) must be rejected in favour of vocalization of *v*, e. g. *yrágrua*, in almost every instance.

Examples: *dçua* i. 162. 19; 175. 4;<sup>4</sup> vi. 63. 7; viii. 5. 35; ix. 94. 5;<sup>4</sup> x. 89. 10;<sup>4</sup> *agháçua* i. 116. 6; *ajáçua* i. 188. 4 bis; *trájardçua* i. 100. 16; *tráçua* i. 100. 17; 116. 16; 117. 18; *jírâçua* i. 119. 1; 157. 3: *catâçua* viii. 4. 19; x. 62. 8: *çyávâçua* v. 61. 5; viii. 85. 19, 20, 21; 86. 7; 87. 7; 88. 8: *sámbhrlâçua* viii. 34. 12; and twice in AV.

Otherwise *-ua*, *-tua* are rare, and almost only after heavy syllables:

<sup>1</sup> The accentless form still creates difficulty.      <sup>2</sup> See Table § 103.

<sup>3</sup> But we may read *vdatasya* instead.

<sup>4</sup> In these the external sandhi gives *á* preceding.

*apuā* x. 103. 12, and once in AV. : *ūrui* ix. 87. 8 ; 1 *tānua* iii. 31. 2 ; 2 *tānua* x. 93. 15, 3 *tānua* ix. 14. 4 ; 78. 1 : *nāvārdstua* vi. 20. 11 ; *pētua* vii. 18. 17, and once in AV. : *rakṣastud* viii. 18. 18.

Vocalization occurs also, but rarely, in perfects in -*vas*, (-*vāñs*).

Exx. after heavy syllables *dāgnis* i. 150. 1 ; iv. 2. 8 ; vii. 37. 4 ; 92. 3 ; Vñl. 9. 4 ; viii. 60. 4 ; and once in AV. : *mādhuis* i. 114. 3 ; viii. 25. 14 ; 65. 7 ; ix. 61. 23 ; 85. 4 ; 113. 2 ; and x. 85. 25. After light syllables still more seldom : *jūferuds* ii. 4. 5 ; *viduās* i. 190. 7 ; ii. 15. 7 ; x. 136. 6 ; *sāsahuis* i. 100. 5.

From *dhāvan* (where however -*van* is only apparently the suffix) we have *dhānua* i. 35. 8 ; *dhānuā* vi. 12. 5 ; *dhānuacyūt* i. 168. 5 : compare the verb-stem *dhānu* § 96.

None of these "resolutions" seem peculiar to any one period of the RV. How thoroughly established the consonantal values are, even after heavy syllables, appears from their exclusive use in such common words as *ārdhvā*, *pārva*, in marked contrast to the almost exclusive use of the vowel values in words of similar form in -*ya*.<sup>1</sup>

§ 86. In the declension of -*i*-*u* stems we find *y* consonant in all forms of the stems *jany-* *paty-* *sakhy-*, except the instrum. sing. for which see § 97 : and in the abl. gen. sing. and the nom. vocation. acc. plural in -*yāh*, -*vāh* (e. g. *aryāh*, *krātvāh*). Light syllables always precede.

Also, wherever a light syllable precedes (and this is usually the case) in the instr. s. mase. and neut., and in the dual in -*vā* (the latter only in the form *paçvā*), and in the fem. dat. in -*vai*, abl. gen. in -*vāh*, loc. in -*vām*.

Forms of this last group occur only rarely in RV. after heavy syllables, for which see § 82.

The exceptions are : *sdkhiuh* viii. 58. 7 ; x. 3. 4 : *ariāh* (gen. s.) iv. 48. 1 ;<sup>2</sup> vi. 14. 8 ;<sup>3</sup> vii. 8. 1 : *mādhuaḥ* (gen. s.) ix. 24. 7 ; 109. 20 : (nom. pl.) ix. 89. 3. Conjectural is *ripudā* iv. 3. 13 : see also § 82 fin. *kṛtud* iv. 23. 8 ; vii. 21. 6 : *vadhuai* once in AV.<sup>4</sup> Here perhaps we may refer to the instrum. *rātiā* i. 129. 10 : see also note 2 below.

§ 87. The infinitives -*ityai*, -*dhyai* and the gerunds -*tya*, -*ya*, -*tvā*, -*tvāya*, -*tvī* have regularly consonantal values. In five cases we have -*dhiai*, all after light syllables: viz. *irādhiāi* i. 134. 2, *yajādhiāi* viii. 39. 1, *vāhadhiāi* x. 22. 5, *riṣayādhiāi* i. 129. 8, *cāyādhiāi* ii. 17. 0. As this infinitive hardly occurs after period A, we cannot trace its history further. Gerunds in -*tuā* or -*tuī* do not seem to occur in RV.,<sup>5</sup> but are common in AV., without regard to the quantity of the preceding syllable: viz. *kṛtūd* 15, *kṛtūd*, *gatūd* (?), *cāyitūd*, *irdhūd*, *daitūd* 2, *drṣtūd* (?), *patitūd*, *pītūd* 2, *baddhuā*, *bhaktuā*, *bhūtuā* 6, *mṛṣtūd*, *yuktūd*,

<sup>1</sup> See Table § 103.

<sup>2</sup> In these passages we have to choose between *rāyāh* *ariāh* and *rādiāh* *aryāh*. Cf. § 219.

<sup>3</sup> The form *vṛṣtūf* v. 53. 14, is possible rather than probable. See § 217.

*vittuā* 2, *stutuā*, *hatuā*. The forms in *-tvā* are still more than twice as common. This is perhaps the most striking example we have of late secondary vocalization.<sup>1</sup>

§ 88. In *-ya* used as a verbal suffix of whatever kind, and in *-nu* as class-signs, vocalization is rare and presumably secondary: it is comparatively common only in the stem *dhamu-* (see § 96b) and the optative *syām* (§ 96d).

Possible exceptions are: *kṣeṣiāntah* ii. 4. 3, *ṛjiantah* vi. 37. 2. 3; *āśiāt* iv. 30. 20. x. 72. 8, 138. 4. Optatives: *acūtm* v. 64. 3, *acūtmu* ii. 19. 7; iv. 4. 14; *rdhiātm* iv. 10. 1, *gāmīdh* i. 187. 7, *jagñidhātm* vi. 50. 10, *viditātm* viii. 5. 37,<sup>2</sup> *varṣītātm* viii. 7. 33, *varṣītuh* x. 26. 8. Class-sign *-nu*: *tanuduh* iv. 45. 2, 6, *dhamuānā* vi. 47. 17, *çṛṇuāntu* iii. 20. 1, v. 41. 12, *sunnānti* v. 30. 6.<sup>1</sup>

§ 89. We find *y* consonant in the nonu-endings *-syā*, *-syāt*, *-syāh*, *-syām*: *-bhya*, *-bhym*, *-bhymā*: *-hya*, *-hyam*: and in *-bhīyah* after a light syllable. The analogy of these forms goes to shew that *-bhīyah* (for which see below § 99) is of secondary origin.

In these extremely common forms exceptions are so few as to be very doubtful, and their value as evidence of the history of the forms seems to be slight. For some alleged instances of *-sia*, see Lanman, p. 338. Other suggested exceptions are *tāsiāh* ii. 18. 1, *vīcavāsiāh* x. 6. 8: *yūṣmbhīam* i. 88. 8, *ndasatyābhiām* i. 20. 8, *prāpaddbhīam* x. 168. 4, *haryatdbhīam* viii. 6. 38: *ndribhīah* i. 48. 6, *nṛbhīah* i. 110. 6<sup>3</sup>: and in AV. *brahmdbhīah*, *majjābhbīah*.<sup>1</sup>

§ 90. Similarly we find almost always *v* consonant in the verb-endings *-dhuam*, *-dhue*, *-sua*: the exceptions, however, number 26; all that I have found (given by Grassmann) are in periods A and B. Ending *-dhva* has always *v* consonant; for *-dhvai*, see § 323.

The forms are: in *-dhuam* *dcidhuam* 3, *amugdhuam*, *dyugdhuam* 5, *drādhuam* 3, *astodhuam*, *irdhuam*, *vavr̥dhuam* (from *vart*, *vrt*): in *-dhue* *ahydhue*: in *-sua* *matsua* 5, *vānsua*, *vavṛtsua* 3, *hdr̥asua*.<sup>1</sup>

The endings *-vahi*, *-vahē* are without exception consonantal.

§ 91. From a comparison of the above sections 78–90, with the tables below, §§ 102, 103, it will be seen that occasional consonantization, in words and forms in which the vowel value is regular, shews late date; but where the consonant value is regular, the vowel value is no direct indication of date, and sometimes belongs to a late period only. Similarly, in those cases in which both consonant and vowel values are fairly common, we can now infer that if vowel values preponderate, the consonantal values are later in date: but if the consonant values preponderate, the date of the vowel values still remains to be investigated.

§ 92. In *dud* 'two' the vowel alone is found in A: whilst in AV. the consonant is nearly as common. Similar change may be

<sup>1</sup> See Table § 103.

<sup>2</sup> *vidiāt* x. 85. 34 (Gr.) is not necessary.

<sup>3</sup> Not x. 148. 4, where we can read *daah*.

noticed in *jiā*, *jiākā* ‘bow-string,’ and the compounds of *jiā*: cf. *jiō* ‘strength’ § 83.<sup>1</sup>

§ 93. In the forms *tuām*, *tuām*, *tuē* the vowels are 3 times as common in A and B<sub>1</sub>, and even 4 times as common in B<sub>2</sub>, as the consonants: whilst in the later periods consonantal forms are much more common. As to *tvā* (enelitio) and *tvāyā*, see above § 83. Comparing the two sets of forms we are led to a double stem, \**tu-* or *tuv-* in the strong cases including the locative), and \**tv-* in the weak cases: a distinction obliterated in period C. The special prevalence of vowel forms in B, remains unexplained.<sup>2</sup>

The occurrences of *tuām*, *tuām* are too numerous to be quoted here: for *tuē*, *tvē* add to those given by Grassmann: *tuē* 169, 5, 187, 6, 192, 13, 190, 8, 219, 8, 232, 17, 245, 9, 254, 3, 298, 9, 328, 3, 4, 357, 1, 442, 3, 517, 17, 520, 4, 521, 6, 527, 3, 528, 3, 532, 7, 547, 5, 624, 16, 639, 8, 664, 28, 670, 6, 687, 8, 701, 14, 712, 5, 713, 5, 822, 7, 847, 3, 869, 2, 870, 4, 895, 8, 946, 3, 966, 3: *tvē* 387, 6, 442, 13, 446, 2, 453, 2, 517, 21, 584, 1, 639, 18, 675, 12, 924, 10, 931, 3, 968, 1.

The instrumental *tuā* occurs only in a single phrase and with a vowel valve. But *tuā-* in composition and derivation, apparently without any distinction depending on any original case-meaning, occurs in both forms in periods A and B, the consonantal form being progressive. The words included are *tvādatta*, *tvādāta*, *tvādāta*, *tvānid*, *tvāyāt*, *tvāyū*, *tvāvat*, *tvāvasu*, *tvāvṛdhā*, *tvādhata*, *tvēsita*, *tvōta*, *tvōti*.

§ 94. In many nouns with suffix -ya, -yā, etc., after a light syllable, even though the y (i) bears no accent, the vowel valve is more common or at least equally so. No principle distinguishing these nouns from those which contain y cons. has yet been established: Edgren's suggestion that those derived from nouns in -a belong to this class is not true without exception. Most of the gerundives are placed here, yet others, such as *avadyā*, 2 *nāryā* ‘praiseworthy,’ have always y. Compare § 84.

The following list will be a guide: the occurrences of y forms (if more than one occur) are added in brackets, the forms of the AV. being included on both sides: *āpīa* 10 (4 in cpds.), *aucathid*<sup>3</sup> 1 (1), *īrīa* 3 (2), *kṣāmīa* 2 (0), *gānīa*, *jānīa* 6 (4), but the compounds have -janya, *jāmarīa*, *dāmīa* 5 (0), *divīd* 72 (52): *dūrīa* 3 (2), *nārīa* 49 (1), *pūrīa*, *mādīa* 12 (1), *yāmīa*, *yūjīa* 23 (0), *rānīa* 4 (4), *rāthīa* 18 (4), *saklīd* 75 (36), *hādīa*, 3 (0): to which may be added *dnīa* 2 (1), though here the suffix is -a. Also *brahmanīd*, *gāmīd* 2 (0), *hāvīd*, *himīd*. Gerundives: *gāddhīa* 4 (0), *gūhīa* 22 (7), *lūjīa* 2 (0), *dādhīa* 2 (0), *dfīa*, *çāsīa*, *hārīa* 30 (10), *vihdīa*: *carkṛīa* 6 (3), *gopaydīa*, *grūtīa* 18 (1). Long i is found in *yāvīd* 3 (0).<sup>1</sup>

§ 95. In the words *sūryā* etc., and *daivya*, the y form is fairly common (including about 25 per cent. of the occurrences) from the earliest period. It may be suggested that *sūryā* has replaced an early *sūdriā*, and that *daivya* is influenced by the pronunciation of the cognate *divyā*. However this may be, consonantization in the RV. is markedly more common than in other words of

<sup>1</sup> See Table § 104.

<sup>2</sup> In i. 158, 1. *aucathyāh* suits the metre better.

the same type : though in the uso of *daivya* it again disappears in period C.'

§ 96. Consonantal *y v* are regular, vocalic *y v* to a greater or less degree exceptional, as follows :

(a) nom. sing. *dyātih* 'heaven.' The vowel form is early. For *dyām* see § 66. See also below, § 221.

(b) verb-stem *dhanv* when followed by a vowel. The *-u* value belongs chiefly to period B. Compare *dhūnuan*, *dhānuan*, § 85.

(c) verb-stem *si* in *sya*, *syatam*, etc. Here *y* is steadily progressive.

(d) in the optative *syām*. The most noticeable form is the first person pl., in which the *-i* form is almost alone in use in AV. To the exx. given by Grassmann are to be added : *siāma* 313. 9, 408. 13, 493. 5, 517. 20, 520. 7, 530. 3, 533. 7, 553. 4, 557. 4, 576. 1, 608. 4, 1022. 7, 798. 38, 848. 12, 857. 1, 862. 12, 864. 2, 890. 11, 892. 12, 952. 4. *syāma* 358. 1, 374. 4, 672. 10.

(e) *tva* 'many.'

(f) *svā* 'own.' The vowel form is progressive.<sup>1</sup>

(g) The imperfects *áhuat*, *áhue* seem to represent a purely graphical variation, as *áhvanta*, *áhve* are also found.

§ 97. Also in the instrumental singular *-yā*, *-vā* from stems in *-i*, *-i* (*i*), and from fem. stems in *-u* after light syllables and from the stems *paty-*, *sakhy-* consonantization is progressive : in the earliest period the vowel is still the more common. The same is true of the feminine locative forms generally in *-yām*.<sup>2</sup> The duals *-ioh* *-voh* from the same stems as are named above are comparatively rare, and no certain rule can be laid down. From *rōdasi*, the gen. loc. du. is *rōdasioh* (16 times) : but *rōdasyoh* is twice written, where the metre requires *rōdusoh* (Grassmann).<sup>3</sup>

§ 98. On the other hand, in the case of the feminine datives in *-yai*, abl. gen. in *-yāh*, the *y* form is primitive, and is only gradually encroached upon by the vowel forms in period C.<sup>4</sup>

§ 99. The history of the suffix *-bhayah* after a heavy syllable is somewhat more difficult to follow. In the earliest period *-bhiah* *-bhayah* are equally common : and it is unnecessary to explain away the forms in *-bhiah*. This is not, however, sufficient evidence that *-bhiah* is the primitive form. After the period A the consonant form seems to advance steadily : but the special favour in which it is found in period B, is perhaps due to the prevalence thereto of the Trisūh metre. The occurrences of *-bhayah* in RV. after a heavy syllable are stated by Edgren as 200, but I have only succeeded in finding 158.<sup>5</sup>

§ 100. Thus in the great majority of forms the trend in the Veda is towards consonantization. That a few groups should be found in which the trend is for the time in an opposite direction is quite in accordance with the general history of language, and

<sup>1</sup> See Table § 104.

<sup>2</sup> See Table, § 105.

<sup>3</sup> See below, §§ 198, 199.

in particular cases "false analogy" or metrical convenience may be contributory causes.

§ 101. No treatment of the vocalization of *y v* can be really complete which does not take into account those similar words and forms in which the Veda writes and pronounces *iy, uv*. Such a discussion is, however, outside the scope of the present article.

§ 102. Table shewing occasional instances of consonantal values in words and forms which have regularly the vowel values in the Rigveda.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
78	Root-syllables .....	2	2	..	2	1	..	64	65
79	Suffixal -yā, -yā, etc. ....	2	2	2	4	4	10	41	55
90	" -yā, -yā, etc. after heavy syllables, except } daiyā, stṛyā .....	21	12	21	38	4	7	87	98
81	Declension of -ī, -ī stems .....	2	1	..	1	3	1	30	40
82	Instrum. -yā, -vā, gen. loc. du. -yoh, -voh after heavy } syllables .....	..	1	1	2	..	3	10	19
	Total .....	27	18	24	42	12	21	244	277

§ 103. Table shewing the occasional occurrences of vowel values of *y v* where consonantal values are regular.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
83	Root-syllables: isolated occur- rences .....	6	4	1	5	8	..	..	8
	sid, tīd .....	13	6	9	15	..	..	..	0
	tūyā .....	0	..	2	2	1	..	..	1
	tūā .....	10	8	5	8	1	4	22	27
	tūt .....	4	1	3	4	1	1	9	11
84	-ia, etc. sporadically after } light syllables .....	6	13	12	25	2	1	2	5
85	aqua .....	4	..	1	1	1	..	..	1
	compounds in -aqua .....	10	..	8	8	1	..	2	8
	others in -ua .....	2	3	..	8	..	1	1	2
	-tua substantival .....	2	..	1	1	..	..	1	1
	perfects in -uds .....	9	1	5	6	..	3	1	4
	dhanuā .....	2	..	1	1	..	..	..	0
86	i -ū stems, certain endings } after light syllables, and } stem rai .....	8	3	1	4	..	..	1	1
87	infinitives in -dhīai .....	8	..	2	2	..	..	..	0
	gerunds in -tūā .....	0	..	..	0	..	..	37	37
88	-ia as class sign, etc. ....	8	1	1	2	..	1	..	1
	-iā optative, exc. syām .....	6	2	1	3	..	..	..	0
	-nu as class sign, exc. dhanu- .....	2	1	2	3	..	..	..	0
89	i irregularly in noun-endings .....	4	2	1	3	..	1	2	8
90, 823	u occasionally in verb-endings .....	14	5	9	14	1	..	..	1

§ 104. TABLE SHewing THE OCCURRENCES OF *i*, *u*, *y*, *ə*, IN THOSE WORDS AND FORMS IN WHICH THE VOCALIC VALUES PREPONDERATE IN THE RIGVEDA.

Refer to §	Vocalic values.												Consonantal values.						Percentages of consonantal values, where there are 25 at least of both.				
	A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	C	A	B <sub>1</sub>	B <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	AV	C	
92	<i>dud</i> , <i>dat</i> .....	9	6	10	16	12	8	14	29	0	2	4	6	2	4	9	15	--	--	--	--	--	--
	<i>jid</i> , <i>jilkā</i> .....	0	6	8	8	1	8	7	0	1	1	1	1	1	1	4	5	--	--	--	--	--	34
93	<i>tudm</i> , <i>tudm</i> .....	244	98	128	220	12	11	76	99	75	29	80	59	13	14	128	150	23	23 [19]	26 [19]	62	66	60
	<i>tudm</i> , <i>tedm</i> .....	66	20	22	42	3	13	16	27	7	5	12	8	1	26	35	29	26 [19]	32	32	32	32	32
	<i>tue</i> , <i>tes</i> .....	26	7	4	11	1	2	--	3	12	6	4	10	2	--	2	32	--	--	--	--	--	--
	<i>tua</i> , <i>tedi</i> , in composition .....	34	12	11	23	1	--	--	1	13	4	9	18	--	--	0	27	--	--	36	--	--	--
94	- <i>a</i> , - <i>ia</i> , etc. in certain words after light syllables .....	156	78	109	187	20	5	14	39	81	20	31	51	11	2	89	52	16	20	21	36	73	70
95	<i>surya</i> , <i>suryā</i> , etc. ....	161	33	82	115	19	17	61	87	35	26	30	62	16	20	115	151	26	44 [30]	22	46	54	70
	<i>daivya</i> .....	23	10	21	31	6	4	10	20	5	8	6	9	--	1	1	2	18	--	22	--	--	--
		658	264	389	654	75	45	181	301	198	97	120	223	52	43	317	412	22	26 [24]	--	40	48	64

§ 105. TABLE SHewing THE OCCURRENCES OF *i*, *u*, *y*, *v*, IN THOSE WORDS AND FORMS IN WHICH THE CONSONANTAL VALUES ARE AT LEAST EQUALy COMMON IN RV. THE SIGNS C AND V IN THE LAST COLUMN MARK THOSE CASES IN WHICH CONSONANTIZATION AND VOCALIZATION RESPECTIVELY ARE PROGRESSING IN PERIOD C.

C. Resolution of *r* and *n*.

§ 106. This variation is by no means so well established as the preceding. It is highly probable for the forms *pit(a)rōḥ*, *māt(a)rōḥ*: and suggests itself constantly in the vocative *ind(a)ra*, occurring in Triṣṭubhi-Jagati verse after the caesura. In the latter case, however, it may be we have a special variety of the verse, such as certainly exists. The combination *ūr* seems also occasionally to represent two short syllables. Anaptyxis, such as we find represented graphically in *uñtana*, *sarñjuntam*, *sunūd*, may explain some cases. The list that follows is merely tentative: a special examination of the metrical probabilities of each case is needed, and that in turn depends upon the more accurate analysis of metre which we have not yet approached.

§ 107. Probable examples of *r* resolved are:

(a) *r* radical: *avri* iv. 55. 5: *kran* AV. 1: *dadhrē* AV. 1: *pri* i. 117. 22; x. 79. 8; x. 95. 13; AV. 3: *prāṇā* AV. 2; *gaçré* AV. 2.<sup>1</sup>

(b) *r* suffixal: *īndra* 120 AV. 4: *īndramādāna*, *īndravāta*, *īndrāñī*, *ugṛd*, *ṛjṛd* 2, *ṛjṛcūa* i. 100. 16, *candrd* i. 135. 4, and AV. 1, *cīrd*, *tāntra* AV. 1, *tvāṣṭṛa* 2, *dasrd*, *dātrā* 2, *namṛd*, *pātrā* 4 and AV. 1, *pipru*, *bhrātrā*, *māntra* x. 50. 4, 6, *mandrā*, *mītrā* AV. 2, *rāṣṭrā* iv. 42. 1 and AV. 1, *rudrā* 16<sup>2</sup> and AV. 5, *raūdra* 2, *vājra* AV. 5, *vajrī* vi. 20. 7, *vācī*, *cukrā*, *cmḍcrū*, *sahīsra*, *sutrātrā* vi. 68. 7, 1 *hōtrā* 4, AV. 2.

(c) *r* declensional: *usrām* x. 6. 5, *pitrōḥ* 20 AV. 1, *mātrōḥ* 3, *svasrōḥ*.

§ 108. Examples of disyllabic *ūr* are:

*ūrjām* x. 76. 1, *ūrjādah* x. 53. 4, *apūrdhān* vi. 67. 9.

§ 109. Examples of *n* resolved are:

(a) *n* radical: *āñjan* (read *anāñjan*) vi. 63. 3, *āñjate* ix. 86. 43: *gnā* 7, *gnāspāti*, *snūbhīh*.

(b) *n* suffixal: *eyauñnd* vi. 47. 2; x. 50. 4; *yajñā* 6, *rēkñah* i. 121. 5; 158. 1; vi. 20. 7; x. 61. 11; 182. 3; *cūñna* i. 175. 4: *āstabhñāt* ii. 17. 5.

(c) *n* flexional. The instances are collected by Lanman, pp. 524, 525. As the vowel ā appears in some cases in the text, the forms can be more fully considered under the heading of flexion.<sup>4</sup>

§ 110. Table showing resolutions of *r* and *n*.

Refer to §§		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
106, 107	<i>r</i> radical: .....	1	--	2	2	1	--	9	10
	" suffixal: .....	102	33	32	67	2	2	24	28
	" declensional: .....	3	3	19	22	--	--	1	1
108	<i>ūr</i> .....	1	1	--	1	1	--	--	1
109	<i>n</i> radical: .....	6	4	1	5	--	--	--	0
	" suffixal: .....	5	2	7	9	--	1	--	1
	" flexional: .....	30	7	8	15	1	1	5	7
	All forms .....	148	52	69	121	5	4	39	48

<sup>1</sup> Perhaps *āñ(a)rāu* i. 120. 2: for exx. in AV., see Whitney, *Index*, p. 5.

<sup>2</sup> Add to Grassmann's list vi. 28. 7: vii. 46. 2, 4.

<sup>3</sup> See above § 70.

<sup>4</sup> See below, § 254.

## D. The Vedic Linguals.

§ 111. Vedic *l*, *lh* appear to occur only as the finals of roots, usually after *t*: they are somewhat less common in period C. The instances are *tl*, *tl*, *kr̄l*, *n̄l*, *marl* (*mrl*), *v̄l*, *hil*: to which may probably be added *kūl* viii. 26. 10, *p̄l* iv. 22. 8, and AV. once, and *mīlh* (very possibly connected with *ml̄*), in the word *mīlhā*, probably also in *mīlhāvā* and (in AV.) *mēdhra*. Perhaps too we should write *jīlhū*, seeing that *dh* proper occurs in no other word in RV. or AV.<sup>1</sup>

§ 112. Vedic *ṇ* (for *nd* see below, § 116) occurs in a very few established words, viz., *kānva* 85, *gāṇā* 74, *niṇyā* 10, *pāṇi* 53, *pāṇi* 32, 2 *vāṇi* 20 (including in each case AV.): and in the late words *kalyāṇa* 4 AV. 0, *pāṇya* 2 AV. 22, *manī* 2 AV. 81.

It also occurs in a comparatively large number of words rarely used, and in these somewhat more frequently in period C.

These are *dṇi* AV. 1, *onīyaskā* AV. 1, *dṇu* 5 AV. 1, *anulbandh* 2, *ānva* 5, *āṇi* 8, *enī* AV. 1, *onī* 4 AV. 1, *kāṇa* AV. 2, *v̄kāṇukay*, *kāṇā* 1 AV. 1, *kāṇukā*, *kūṇapd* AV. 4, *kūṇāru*, *gūṇā* AV. 1, *drugharā*, *drīḍhikā*, *nicumpūṇā*, *nīṇik*, *v̄phan* 2, *bāṇā* 1 AV. 1, *bāṇā* AV. 2, *vāṇī* 2 AV. 1, 1 *vāṇā*, 2 *vāṇā* 2, 3 *vāṇā* 4, 1 *vāṇī* 2, *vāṇīcī*, *veṇū*, *çāṇā* AV. 1, *çōṇo* 6, *çōṇā* AV. 8, *sthāṇū* 1 AV. 4, *sthāṇā* 5 AV. 2.<sup>1</sup>

§ 113. Vedio *s* (for *st*, *sth* see below, § 117) occurs in all periods in the numeral *sūṣ*, and its derivatives. As a variation of *s* in composition after *a*, *ā* it occurs in a few words (*āśūdha*, *turūsūh*, *purūsāh*, *prāṇāśāh*) and most commonly in the earlier Rigveda. Otherwise it is more common in period C.

The words are *d̄s̄o*, *āṣa* AV. 1, *kalmāṣa* AV. 2, *kavāṣa*, *v̄kaṣ* AV. 1, *kāṣkāṣo* AV. 2, *cāṣḍa* 2, *cāṣa*, *jīḍāṣo* 4 AV. 3, *jāṣd* AV. 1, *pāṣḍa* 2, *boṣkāṣo*, *māṣmoṣā* AV. 1, *māṣa* and compounds AV. 3, *yēvāṣa* AV. 2, *vāṣoṭ* 11, AV. 14.<sup>1</sup>

§ 114. *t* is late in the Veda, and occurs only in words rarely used: it seems probable that they were mainly borrowed from non-Aryan languages.

Examples are: *aragārāṭo* AV. 1, *oraṭvā*, *āghāṭd* AV. 1, *īṭa* AV. 2, *īṭāṭ*, *kakāṭikā* AV. 1, *renūkakāṭa*, *cakōṭt*, *kāṭuka*, *piptilikāvōṭd* AV. 1, *kūṭd* AV. 1, *kīkoṭa*, *vīkaṭa*, *kīṭ* AV. 1, *kūṭa*, *kurūṭin* AV. 1, *kūṭa* 1 and AV. 1, *kūṭa* AV. 1, *corkōṭa* AV. 1, *cārkōṭa* AV. 1, *kīkāṭa* AV. 1, *kīṭiṭa*, *kēvāṭa*, *tirīṭin* AV. 1, *poṭord* AV. 1, *poṭaurd* AV. 1, *paṭā* AV. 1, *phāṭ* AV. 2, *bīṛṭa*, *bekāṇṭa*, *maṭmaṭā* AV. 2, *rāghāṭ* AV. 1, *lālāṭa* AV. 2, *vāṭurīn* 2, *vāṣoṭ* 11 AV. 14, *graūṣaṭ*. Of the 36 words quoted, there are 19 in which *k* precedes *t*, being separated from it at least by a vowel. *ṇt* occurs once in AV., in *kāṇṭaka*.<sup>1</sup>

§ 115. *th* only occurs in the words *çirīmbiṭha*, *jāṭhara*, *jathāra*, *jāṭhalā*<sup>2</sup>: *dh* (except as treated above, § 111) only perhaps in *jāḍhu*. Of these words *jathāra* alone shows more than a single occurrence; it is most common in period B. *ṇṭh* occurs once in AV., in *sahākanthika*.<sup>1</sup>

§ 116. For *d dh* (or *l lh*) radical, see above, § 111. Otherwise we find *d* in the early Rigveda in *padbhīḥ* 6 times, and in *pāḍ-*

<sup>1</sup> See Table § 119.

<sup>2</sup> Also in *pāṭhorvan*, *pīṭhīnas*.

*grbhi*: this *d* presumably originates in the instrum. pl. of a noun *páy*, which has then become confused with *pád* in the instrum. pl. and in the compound.<sup>1</sup> The exclamations *bád* 9, *badá* also seem to be early. Other occurrences in the RV. proper are *kárīdatin*, *tad*, *tađit* 2, *medi* 2.

Otherwise *d* is much commoner in the period C: and the combination *nd* is almost entirely confined to that period. The most important words (with the number of occurrences in RV.) are *anadváh* 3, *jurīgiddá* (in AV.), *púdbiga*, *puroddág*, *purodáça* (AV.); *āndá* 4 (and in *mártandá* 3), *kánda* (AV.), *kundá* (AV.), *cánda* (AV.), *dundá* (AV.), *pínda* 2, *mañdáku* 8, *gikhandán* (AV.); in RV. occur also *nádá*, *nádī*, *púndárika* 1, *mañdúra-dháruka* 1, *gándika*, *gándú*.

§ 117. The numeral *astú* only occurs commonly in period C, but we can hardly deny its existence in the early language: *kásthá* is also early. Otherwise the combinations *st*, *sth* are late. Examples in RV. are *āstri* 'hearth,' *upastút*, *jarádaśti* 2, *apásthá* (in *apásthávat*), *as̄hvává* 2.

§ 118. The linguals that are not phonetic, play on the whole a small part in the Veda, but the Rigveda proper shews us the use established of *l lh* radical, and of *n s* in a limited number of words; *th*, *dh* occur only sporadically. But *t*, *d*, *nd*, *st*, *sth* hardly occur before the period C, and then rapidly increase in frequency, whilst many new words in *n s* appear in the same period. We may therefore infer that the first linguals in Sanskrit were continuous sounds: that later they were supplemented by a complete series, borrowed from surrounding non-Aryan languages: and that finally Vedic *l lh* were supplanted by the later *t dh*. Whether *lh* represents one sound or two can hardly be decided: the graphic representation points to a double sound and we have perhaps no example of a syllable ending with *lh* reckoned as light: the first syllables in *trlhá*, *drlhá*, *jálhú* (if this is not rather *jádhū*) being heavy.

§ 119. Table of linguals.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
111	Vedio <i>l</i> , <i>lh</i> : <i>id</i> .....	16	13	23	80	11	2	10	23
	<i>id</i> .....	78	20	41	61	6	3	10	19
	<i>kiid</i> .....	1	—	—	0	—	—	—	0
	<i>krid</i> .....	10	11	7	18	3	3	2	8
	<i>píd</i> .....	1	—	—	0	—	—	1	1
	<i>niid</i> .....	5	5	7	12	1	—	1	2
	<i>marid</i> , <i>mríd</i> .....	54	9	33	42	12	6	38	56
	<i>vid</i> .....	15	5	18	18	2	6	1	9
	<i>hitd</i> .....	18	8	9	12	4	—	11	15
	<i>midh</i> .....	87	8	11	19	1	3	4	8
	Total.....	225	74	144	218	40	28	79	141

<sup>1</sup> See Bloomfield, JAOS. xiv., p. cliv.—ED.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
112	n: <i>kanyd</i> .....	64	2	8	16	—	—	11	11
	<i>ganyd</i> .....	17	14	27	41	1	5	10	16
	<i>niynd</i> .....	8	2	3	5	2	—	—	2
	<i>pāni</i> .....	18	6	15	21	9	—	5	14
	<i>pānyi</i> .....	12	5	7	12	1	1	0	8
	2 <i>vñi</i> .....	12	2	4	6	2	—	—	2
	Total .....	120	31	64	95	15	0	33	53
	<i>kalyāna</i> .....	—	—	3	3	1	—	6	10
	<i>pūnya</i> .....	0	—	—	0	—	2	23	24
	<i>māti</i> .....	0	—	2	2	—	—	81	81
	rarer words .....	23	9	16	25	2	5	27	34
	Total .....	23	6	21	30	3	7	139	146
113	s: <i>śasādha</i> , etc. ....	14	6	6	12	1	1	8	5
	<i>āśa</i> , etc. ....	7	1	0	16	4	2	30	36
114	t, nt: .....	7	1	8	9	5	6	46	51
115	th, nth: .....	7	14	13	27	—	1	—	1
116	d: <i>pādbhil</i> , <i>pādgrbhī</i> .....	4	1	2	3	—	—	—	6
	<i>bāl</i> , <i>buḍā</i> .....	5	2	3	5	—	—	0	0
	other words .....	4	—	10	16	11	4	71	86
117	nd: .....	3	1	6	7	5	10	54	66
	st, sth: <i>astī</i> , etc. ....	4	1	2	3	4	2	34	46
	<i>kāṣṭha</i> .....	4	2	3	5	1	1	1	3
	other words .....	1	1	—	1	—	5	22	27

## E. The Letter l.\*

§ 120. This letter, never very common in Sanskrit, is in the earlier parts of the Rigveda (A and B) rare : in C it is much more common. That the sound really existed in the earliest periods seems proved by certain words shewing it, which afterwards passed out of use : and in particular *ulokā* and (in compounds) -*mičla*. The following 12 words only shew five or more occurrences in A and B together : *kalāca* 48, *glōka* 24, *ulokā* 22, *valā* 22, *bahulā* 16, -*mičla* 14, *kévalā* 11, *bála* 11, *viçpálā* 6, ✓*valg* 6, *nīla* 5, *palitā* 5. Of these -*mičla* alone shews more occurrences in A than in B : *kalāca*, *ulokā*, *glōka* also have 5 or more occurrences in A.<sup>1</sup>

§ 121. The word -*mičla* does not occur in period C : of the other 11 words five are more common in C than in B, *bahulā*, *kévalā*, *bála*, ✓*valg* and *nīla*. There are five words which occur chiefly in B : they are *kalāca*, *glōka*, *ulokā*, *valā*, and *viçpálā*. *paličā* is equally common in B and C. Of these *ulokā* is replaced during period C by *lokā*.

§ 122. There are 13 other words<sup>2</sup> (see table C) which occur at least 5 times in the whole Rigveda : their use rapidly increases in each of the six periods. In A and B there are 29 occurrences : in C, and C<sub>1</sub>, 75, in AV. 246. In the whole language there is no

\* See Professor Arnold's essay on this subject, *Festgruss an Roth*, pages 145-148.—ED.

<sup>1</sup> See Table, § 124.

<sup>2</sup> Including the group of words connected with ✓*laks*.

more striking instance of development. Words occurring less often than 5 times in RV. shew just the same growth, but give nearly three times as many occurrences.

The following are the words and word-groups noted as containing *l*, but occurring in the Rigveda less than five times: those occurring in the Atharvaveda are too numerous to quote:

(a) Proper names: *apālā*, *álinu*, *álibu*, *kali* 3, *kali* 7, *kheli*, *palastijamadugnī*, *plūi*, *phiyogi*, *balbrithā*, *bhulānā*, *mātali*, *mudgala* 2, *mudgalānī* 2, *lópanmārū*, *vibali*, *ninivitī* 4.

(b) Generic names of animal and vegetable substances, etc.: *álu* 'poison' in *áluktā*; *álpā* 'undergrowth'; *palazú*, a kind of tree, in *apalazú*, *supalazú*; *píppalu*, a berry 3, and *supíppalu*, *bálbaja* in *balbajastukā*, a kind of grass; *líbujū*, an ivy 2; *víalkugū*, a plant; *calmalī*, a tree 2; *cimbulū*, a fruit; *cípala*, a water-plant; *úluka* 'owl', and in *úlukayatū*, *cuculukayatū*; *piñlū* 'ant', *plisi*, a gnat, *lodhā* 'fox' (?), *lopázū* 'jackal', *sáldvirkú* 'jackal' (?) 2.

(c) Other words, in which *l* seems to belong to the radical element, but which do not belong to any recognized word-group: *akhkhalikftya*, 'having shouted', *álam* 'in vain' 2, *alalubhavat* 'rustling', of water, *alátrnā* (?) 2, *aláyia* (?), *udumbalā* (?), *úlba* 'placenta', and perhaps also in *anulbāni* 2, *aulinii* (?); *kalmali* 'glimmer' (?) in *kalmalikin* (2), *kaçaplakā*, *kíldála*, 'drink,' in *kúlápá*, *kúla* 'nest' in *kulápā*, *kulayayat*, *kulayín*, *mahákru*, *kúlica* 'axe' 2: *kulphú* 'knuckle', *kulyd* 'stream' 3, *kúla* 'precipice', *kaulitará* (?), *khálu* 'truly', *khilya* 'barren land' 2, *gáldā* (?), *jálasa* 'bealing' 2, and in *jálásabhesaja* 2, *jálpi* 'whispering' 2, *tálpu* 'bed' in *tulpaçívan*, *tílevila* 'fruity', and in *tvívilay*, *pláci* 'spleen' (?), *phaligá* 'basin' 4, *phulgua* 'stammering' (?), *phála* 'ploughshare' 2, *bhala* 'indeed', *mála* (?), *laláma* 'spotted' (?) *lánghala* 'plough', *logú* 'clod' 2, *cílpá* in *sucilpá* 'patterned' 2, *cuká* 'purchase money' 2, *salaláka* (?) 2, *sílika* (?) in *sílikamadhyama*, *siálá* 'brother-in-law', *hládika* 'cool', and in *hládikávat*.

(d) Verb-roots shewing *l*-forms only are few: *glú* 'be weary'; *mlí* 'wink'; *mlü* 'soften', and in *ánbhímlátavarna*; *lubh* 'be lustful'; parallel to *r* forms are *ulké* 'glare' 2, *kuli* 'fracture' and *prakalavíd*, *kálá* 'time', *klóca* 'ery', *caláculú* 'staggering', *plúi* 'many' in *palukáma*, *palvaghá*; *plu* 'swim', and in *plavá* 'boat'; *mála* 'root' and in *sahlmíla*; *mluc* 'bide', *labh* 'seize' 3, and in *sulábhika*, *lip* 'anoint' 3, *li* 'shoot' (?) and in *lýa*, *lóman* 'bair' 2, *lhita* 'red' in *níla-lohitá*, *válga* in *catávalça*, *sahlsrávalça* 3, *vispuliñgaká* 'spark-throwing', *vlug* 'pursue' 2, and *abhvílañgá*, *calyá* 'arrow', *cúla* 'point', *sílá* in *sílámávat*.

(e) Suffixal *l* is not common: *-la kapilá*, *madhulá*, *staullá*: *-ala* in *áchandala*, *úpala* (in *upalapraksín*), *khargálá*, *khígala*, *játhala*, *trpála* 2, *lánghala*, *vrśalá*, *cábbú*: in *-ála* *kíláu* *caçdá* 2: in *-ila* *tlívila* 2, *trdilá* (and in *átrdila*): in *-ula* *añgulá* in *daçán-gulá*: in *-ala* *ciçúla*: in *-vala* *ákrsvala*, *vidvulá*: in *-lyá* *pátyala*, *máryalyá* *gámyalyá*: in *-li* *kalmali* and *gulmali* 2. Of the above only *añgulá*, *úpala*, *játhala* shew parallel forms with *r*.

Of the 110 words and groups roughly arranged as above only 40 occur more than once in RV.; and as we have seen, there are only 25 other words and groups, each occurring at least five times. Nearly half therefore of the words containing *l* in RV. are ἄπαξ λεγόμενα.

§ 123. In period A then, *l* had almost disappeared, presumably under Iranian influence. Its use then rapidly advances, much more so than is the case with all the new linguals put together. Amongst the new words many were probably non-Aryan: but the list given supports the general view of the comparative grammarians, that the true tradition of the Indo-European *l* was not lost. For amongst the first words to reappear in the poetic vocabulary are *glōka* (χλίω), *ulokū* (*lucus*), root *valg* (*valgus*), *palitī* (*πολιός*), in all of which Indo-European *l* can be plausibly suggested: and thence shew infixal *-la-*. *ulokū* may be a half-way form between *rokā* (cf. *rocanā* with a similar meaning) and *lokā*. But in most words original *l* had been irrevocably changed to *r* before the reaction set in.<sup>1</sup>

§ 124. Letter *l*, Table of occurrences.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
120	A. -miçla .....	8	5	1	8	--	--	--	0
121	B. <i>kaldça</i> .....	13	27	8	35	--	2	0	8
	<i>glōka</i> .....	0	8	10	18	2	1	2	5
	<i>ulokd</i> .....	0	5	8	18	3	1	--	4
	<i>valdī</i> .....	8	4	15	19	2	--	--	2
	<i>bahuldā</i> .....	4	7	5	12	2	1	11	14
	<i>kévala</i> .....	3	4	4	8	4	2	11	17
	<i>bdtā</i> .....	1	3	7	10	3	11	71	85
	<i>viçpālā</i> .....	0	--	0	6	--	--	--	0
	<i>valg</i> .....	3	2	1	8	1	--	6	7
	<i>nīla</i> .....	2	2	1	8	--	1	10	11
	<i>palitā</i> .....	0	2	3	5	1	--	4	5
	All in B .....	44	64	68	132	18	19	121	158
122	C. <i>ulū</i> (in <i>ulikhala</i> ) .....	0	--	--	0	5	--	5	10
	<i>kalp</i> .....	1	--	8	3	4	13	57	74
	<i>kil</i> ( <i>kilda</i> , <i>killiça</i> ) .....	0	2	--	2	1	2	11	14
	<i>kila</i> .....	0	--	4	4	4	3	2	9
	<i>khdlā</i> .....	0	1	--	1	5	--	7	12
	<i>jldzā</i> .....	1	--	3	3	--	--	3	3
	<i>phāta</i> .....	0	--	1	1	2	3	10	15
	<i>balā</i> .....	1	--	3	3	1	1	16	18
	<i>bil</i> ( <i>bila</i> , etc.) .....	0	1	2	3	3	--	12	15
	<i>māngalā</i> .....	0	--	2	2	--	6	10	16
	<i>lakṣ</i> .....	0	1	--	1	4	--	11	15
	<i>lokā</i> .....	0	--	1	1	2	8	74	84
	<i>salīld</i> .....	0	--	2	2	2	6	28	36
	All in C .....	8	5	21	20	38	42	240	321
122	D. Words occurring less than five times in RV .....	11	5	50	55	75	49	733 <sup>1</sup>	857
	All occurrences .....	66	79	140	219	120	110	1100 <sup>2</sup>	1386

<sup>1</sup> See Table, § 124.

<sup>2</sup> These numbers are approximate.

## F. Sandhi.

§ 125. Sandhi combination of vowels is everywhere progressive in the Rigveda. Under this heading we include here only external Sandhi, and internal Sandhi in compounds. Flexional Sandhi is more conveniently treated under the heading of flexion, but has been partly discussed already.

The frequency of Sandhi appears to depend entirely upon the first of the two vowels concerned, that is, upon the final vowel of the prior word or prior member of a compound, except in those cases in which *i*, *ī*, *u*, *ū*, are followed respectively by similar vowels: for instance *a* *r* combine just as freely as *a* *a*.

## (a) External Sandhi.

§ 120. After final *a* & Sandhi combination is regular in RV. and AV. The proportion of occurrences of hiatus (except at the caesura) declines regularly from 20 per cent. in period A to 5 per cent. in periods C<sub>1</sub>, C<sub>2</sub>.<sup>1</sup>

§ 127. At the caesura hiatus after *a* *ā* is relatively more common: I have noted there 210 instances, elsewhere 447. In period A those metres which employ the caesura are rarer as compared with period B, but the instances of hiatus there are almost equal. Hiatus apart from the caesura is almost twice as common in period A.<sup>2</sup>

§ 128. Where *i*, *ī*, *u*, *ū*, are followed by similar vowels respectively (of which the instances are not very numerous), combination is regular. Hiatus is, however, not uncommon, nor confined to any special period: the instances are about 15 per cent.<sup>2</sup>

§ 129. After final *ī* *ū* hiatus is the rule. But when the first word is a pyrrhic, as *pári*, *ānu*, *urū*, combination is rapidly progressive in RV., the proportion of combined forms being in the respective periods 18, 25, 33, 50, 63. In the great majority of instances we have prepositions followed by their nouns or verbs: and we can readily believe that this relationship favoured combination: but other words of the same metrical type seem to give the same results.<sup>3</sup>

§ 130. Otherwise combination after *i* *ī* *u* *ū* is quite rare, though somewhat more common in the periods C<sub>1</sub>, C<sub>2</sub>.<sup>1</sup>

§ 131. Where final *ah* is followed by the initial vowel *a*, hiatus is the rule in RV.: but combination is progressive.<sup>2</sup>

§ 132. There are several instances in RV. of combination in positions in which it is not permitted in classical Sanskrit. Where the second word is *ivā*, it is simplest to suppose that *vā* is to be read, even though it is not so written: see below under Particles, § 457.

§ 133. Combination of *e* *ai* with following vowel is rare and late. Examples will be found i. 59. 3; 79. 11; 85. 7; 118. 7(?) ; 162. 7; iii. 29. 3; v. 30. 3; vi. 0. 0; vi. 0. 2; 48. 18; vii. 1. 19; 72. 3; Vāl. 10. 3; x. 75. 2; 79. 6; 85. 40; 145. 6; 161. 5; 166. 5.<sup>1</sup>

<sup>1</sup> For the AV. no complete collections have been made: see p. 204.

<sup>2</sup> See Table § 142.

§ 134. Combination of final *aḥ* with initial vowels other than *a*, and of final *āḥ*, is occasional, in the early hymns and the latest : somewhat similarly *am* or some other vowel followed by *m* with a following vowel, in which case it is often obscured in the text. Examples: *aḥ+a* ii. 20. 8; *aḥ+i* vii. 86. 4; *aḥ+u* x. 90. 4; *aḥ+r* x. 87. 15; *aḥ+o* v. 52. 14; *āḥ+a* i. 177. 4; *āḥ+u* iv. 34. 3; *am+a* i. 14. 3 ; iii. 50. 2; *am+u* x. 93. 10; *ām+a* vii. 19. 5; *im+i* x. 20. 2; *um+u* x. 144. 5. The interesting combination *āñ+a* seems required x. 158. 2.<sup>1</sup>

Instances also capable of other explanations are : *aḥ+a* vii. 41. 6<sup>2</sup>; x. 129. 6<sup>3</sup>; *aḥ+i* (i) viii. 1. 26<sup>4</sup>; x. 86. 16, 17<sup>5</sup>; *āḥ+a* iii. 30. 21<sup>6</sup>; x. 51. 9<sup>7</sup>; *am+a* vii. 66. 8<sup>8</sup>; x. 135. 7<sup>9</sup>; *am+u* i. 161. 8<sup>10</sup>; *ām+r* vi. 17. 7<sup>11</sup>.

#### (b) Sandhi in composition.

§ 135. In compounds of which the first element ends in *a*, *ā*, Sandhi is the rule : uncontracted forms being almost entirely confined to period A, and to those words in which the second element begins with a heavy syllable. In the following cases only of compounds in -*agva* is resolution suggested by the metro : *isīd-agva* i. 122. 13, *fīrīd-agva* i. 141. 12, *gīvād-agva* v. 52. 1, *saptād-agva* v. 45. 9. Similarly *saptū-āśīa* appears only in x. 40. 8. As in classical Sanskrit, *prāuga* (for *prā[y]uga*) is always uncombined.

Other examples of uncontracted compounds in RV. are *dīcha-ukti* 4, *dchidra-ūdhan*, *indra-ūtū*, *ukthu-arkā*, *ūrja-ad* (7), *kṛṇād-adhvan* 2, *kṣī-prā-iṣu*, *ghṛtā-anna* 2, *candri-agva* 2, *trptā-añcū*, *dānd-apnāh*, *daand-ōkah*, *devi-idha*, *pra-itār*, *prā-iddha*, *ratha-ūdha*, *vīśād-anta*, *sahasra-ārghā*, *supra-ētu*, *svid-ētu*: *ā-ariṇa*, *ā-iṣi*, *indra-agnt* (for *indrā-agnt*) 18, *tūt-ūta* 2. In AV. *prā-dpti*. Although *sapta-tṣi* is written, yet *saptarṣi* is to be read both in RV. and AV.<sup>12</sup>

§ 136. Monosyllabic elements in *i*- *u*- (e. g. *dvi*-, *tri*-, *ni*-, *su*-) are not combined with dissimilar vowels except occasionally in the case of *su*-: similar vowels are only found after *su*-: here hiatus is more common in A, and combination is more common later. For *svid*, *svādhā*, see above § 83; for *svār*, *svargā*, § 78; *su+rlā* gives us *sūnṛla*, *su+itā* *sūvitā*, both old words.

Longer elements followed by similar vowels are rare ; combination seems to be required, as in *prātīti*, *pratītia*, *prātīṣani*. When dissimilar vowels follow, hiatus is required, except as in the next section.<sup>13</sup>

§ 137. Where the first element is a pyrrhic, and is followed by a dissimilar vowel, hiatus is the rule in period A, but combination rapidly gains ground. For *r̥tvīj*, *gīvāyati*, see above § 83. In AV. hiatus is only noticed in *hārī-agva* 2.<sup>14</sup>

§ 138. Compounds of which -*ac*, -*ānc* is the second element lose the initial *a* of this part in certain positions : the preced-

<sup>1</sup> Where, of course, the nasal represents merely the nasal coloring of a pure vowel in a true open syllable, and we are not to be misled by the *pada-pāṭha*.—ED.   <sup>2</sup> As a Trīṣṭubh with extra syllable at the caesura.

<sup>3</sup> Reading *yām* for *iyām*.   <sup>4</sup> Reading *sā* for *sādī*.   <sup>5</sup> See Table, § 142.

ing vowel being lengthened by compensation. In these forms in which -ac is retained we find *akudhriac*, *asmadrīuc*, *niāc*, *niānca*, as in § 130. After pyrrhics *juic* only, but *dadhīuc* and *dādhyūc*, *pratīc* and *pratyāñc*, and *gvityūc* as in § 137: the examples are included in the table under that section.<sup>1</sup>

§ 139. Where the first element ends in -as, -e, -o there is no contraction.

§ 140. Prepositions followed by verbal nouns follow the rules just given, and the examples are included accordingly.

§ 141. For external Sandhi I have made a complete collection of the instances in RV., which, however, is too lengthy to publish now. For the AV. I have made no collection. Even in the RV. the metre is not always a decisive guide, and it is still less so in AV. There is no reason to suppose that the occurrences in AV. of hiatus are more in number than is represented by the calculation used,<sup>2</sup> in which they are reckoned as twice as many as those occurring in C<sub>1</sub> and C<sub>2</sub> together. After a more complete study of the metre of the RV. and AV., a complete list of the instances of hiatus would be in place. Benfey's calculation that hiatus is more frequent after *nā* 'like' than after *nā* 'not,' is sufficiently accounted for by the evidence that *nā* 'like' is an earlier word.<sup>3</sup>

For Sandhi in composition the requisite material is available in the respective *indices verborum*.

§ 142. Table of Sandhi variations.

Refer to §	EXTERNAL HIATUS.	A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C circa.
127	At caesura after a.....	61	24	50	74	4	3	..	20
	" " ð.....	80	14	20	34	3	1	..	12
126	Elsewhere " a.....	216	98	62	100	17	15	..	95
	" " ð.....	55	26	21	47	8	4	..	20
	All occurrences after a ð ..	862	102	153	255	27	28	..	150
128	At caesura, i ī ū ū before similar vowels.....	10	2	8	10	3	..	..	9
	Elsewhere before similar vowels .....	14	3	8	11	8	2	..	30
129	After pyrrhics in i, ū before dissimilar vowels.....	87	58	76	184	30	15	..	180
	EXTERNAL COMBINATION.								
129	Final i ū of pyrrhics with dissimilar vowels.....	19	20	38	58	30	25	..	150
130	Elsewhere final i ū with dis- similar vowels .....	0	1	5	6	4	3	..	21
	All occurrences after i ū ..	25	21	43	64	34	28	..	171

<sup>1</sup> See Table § 142.

<sup>2</sup> See above, p. 204.

<sup>3</sup> See below, § 457.

Refer to §	EXTERNAL COMBINATION, continued.	A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C circa.
131	<i>ah</i> with <i>a</i> .....	26	13	22	35	10	13	..	65
133	<i>e, ai</i> with vowel .....	4	..	7	7	4	4	..	25
134	Other irregular combinations	9	1	1	2	..	3	..	?
INTERNAL HIATUS (uncontracted compounds).									
135	After <i>a, ā</i> .....	49	3	9	12	1	1	1	3
136	<i>su-</i> with similar vowel .....	9	3	..	3	..	..	..	0
137	After pyrrhics in <i>i, ū</i> with dissimilar vowels .....	41	8	15	23	9	3	2	14
INTERNAL COMBINATION (contracted compounds).									
136	<i>su-</i> with similar vowel .....	6	4	5	9	-	4	4	8
	" with dissimilar vowels .....	..	1	2	3	1	1	19	20
137	Final <i>-i, -ū</i> of pyrrhics with dissimilar vowels .....	7	5	12	17	2	5	24	81

§ 143. There are numerous other points in which forms more archaic than those of our recension are indicated by the metre, but they seem not to throw light on the date of the hymns in which they appear:

- (a) for *pavaká* read throughout *pavákú*.
- (b) for *purucundrá* read throughout *purucandrá*.
- (c) for *chardih* read throughout *chadih*.
- (d) the form *iyám* is sometimes monosyllabic: see Grassmann.
- (e) *prthiví* 'earth' is disyllabic, i. 191. 6; vii. 34. 7; 99. 3.
- (f) for *ukthá* read *ucáthá* ii. 11. 2; v. 4. 7, and perhaps vi. 24. 7; viii. 2. 30; x. 24. 2.
- (g) for *márta* read *mártia* i. 63. 5; i. 77. 2; ii. 23. 7; vi. 15. 8; vii. 4. 3; 25. 2; 100. 1; viii. 60. 7; ix. 94. 3; x. 63. 13.
- (h) doublets with a long vowel in the penult may be suspected in the case of the following words: *apám* 8 times: *isirá*: *gávám*: *jánān*: *nárah*<sup>1</sup>: *brhát* (vi. 24. 3), *rátha* in *candrarátha* i. 141. 12; vi. 65. 2, and *rathá* i. 77. 3, and in the superlative ending in *-tama*.
- (k) the first syllable of *nrñám* is always long.
- (l) a short vowel is frequently to be read in place of a long before the verb-suffix *-nā, -nī*: e. g. in *prináná*, *drūnáná*: and in the dual, e. g. in *ásáthe*, *dsáte*.

- (m) final *-nn* before a vowel only makes position where the second *-n* represents a lost consonant, e. g. in 3 pers. pl. of secondary tenses, and in the nom. sing. of participles. Otherwise *-n* should be restored, and especially in the locative singular, e. g. *sámin ádhan*, i. 152. 6, etc.

§ 144. It may be convenient to notice here other exceptions to the simple metrical rule of the Rigveda that a long vowel or a short vowel followed by two consonants (amongst which *n, m*,

<sup>1</sup> See below, § 216.

*h, h̄* are included) gives a heavy syllable, and a short vowel not so followed, a light syllable.

- (a) *ch* is almost always to be read as a double consonant *ccch*.
- (b) *kṣ* sometimes counts as a single consonant : e. g. *nákṣan-tah* vi. 63. 3.
- (c) *ñ m̄ k̄* are not always taken into account : e. g. *áñhasah* i. 58. 9, *tibhyani cañsi* x. 148. 4, *rtaśdāpuh satyāh* vi. 50. 2.
- (d) a final vowel left standing before a vowel is regularly shortened : e. g. *kā asmai* i. 77. 1, *mári ápānsi* i. 85. 9, *vīṭ árvā* vii. 44. 4 : but not *ā* of the dual where it is left standing according to rule before *u*.

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## CHAPTER II. NOUN-INFLEXION. § 145-286.

### A. Stems in -a, -ā.

§ 145. Masculine and neuter nouns in -a form the instrum. sing. occasionally in -ā. We may exclude from consideration those words which as adverbs retain the older form in all periods: such are *anā*, *sínā*, and perhaps others.

Masculine forms (Lauman, pp. 334-5): *ghandā* 4, *ghrnā* 5, *cam-asā*, *tuā* 5 (Gr.), *dūndā* 4, *yajñā* 3, *huvā*, *himā* 2. Less certain are *krāñdā* 7, and *tuñ-(tvñ-)* in the following compounds : *tuñita*, *tubtu* 20, *tubti* 3, *tuñdutta* 2, *tuñdāta* 4, *tuñvṛdha* 3, *tuñhata*. 66 exx., of which 47 are in A, one only in C.

Neuter forms (Lanman, pp. 335-6). Of these *mahitvā* 40 seems to become crystallized and is found almost equally often in all parts. From other words we have 27 forms only in RV. and AV., chiefly in periods A and B.

Although even in period A the forms in -ena are nearly three times as frequent as those m. and n. in -ā, yet the number of the former increases rapidly in the succeeding periods : which seems to indicate a growing predilection for the use of this case, even before the passive construction became usual.<sup>1</sup>

§ 146. 'Homophonous' instrumentals. Much more common are similar forms from feminine stems in -ā (Lanman, p. 358). From Lanman's list we may withdraw as uncertain *agriyā*, *isudhyā*, *gūhā*, *dvitā*, the connexion of which words with this class is doubtful.<sup>2</sup> Several words still remain as to which we may doubt whether they were felt by the Vedic writers as nouns or as adverbs, e. g. *irmā*, *samandā*. We may add to the list *bandhūtā* iii. 80. 1; x. 144. 5, and the corresponding forms from

<sup>1</sup> See Table § 164.

<sup>2</sup> There is also only one occurrence of *tanyatā*, not three, as L. states.

radical *-ā* stems (Lanman, p. 447). The whole no. of forms in RV. then appears as 226, in AV. 8: in periods A and B they are equally common.

The corresponding forms in *ayā* are decidedly more numerous in RV.; I have counted 362, not including the form *ayā*. In A and B these forms are half as common again as those in *-ā*: in C, twice as common: and afterwards they are almost exclusively used.<sup>1</sup>

§ 147. Lanman suggests *a-ā*, *ā-ā* as the original case forms: the latter would next become *a-ā* by the rule *vocalis ante vocalem*. Of the first form he finds a trace in *mahitvā* viii. 25. 18: and though it is easier to read *mahitvā*, yet the fact that we have other such pairs of forms still makes it likely that *-ānd* is an experimental form of instr. sing. for the masc. and neuter, parallel to *-ayā* for the feminine: for the "stem" *-tvā* see below § 310.

The longer survival of the feminino instrumentals in *-ā* is, as Lanman points out, largely restricted to the feminine abstract nouns in *-tā* and *-tā*, *-yā*. Apart from dissimilation, which works in the latter case, nouns thus forming a class have probably more resisting power: and we may compare the feminine abstract nouns in *-ti*, which likewise maintain somewhat longer the similar instrumental in *-tā*. See below § 181.

§ 148. Masc. and fem. duals in *-ā*. These, whether from stems in *-a*, *-ā* or from consonantal and other stems, are regular in RV. before consonants and *-u*, and at the end of even *pādus*. Even in C, C, the forms in *-au* are only one quarter of the whole. Nevertheless 28 such forms occur in the periods A and B, as compared with some thousands of the *-ā* forms: and these are not to be explained away upon any hypothesis of appended verses or corruption of the text. The poets of book v. (the *Ātreyāḥ*) would seem first to have accepted the innovation.

The passages in which *-au* occurs are i. 95. 7; 120. 2; 140. 3; ii. 27. 15; 30. 6; iii. 54. 16; 55. 11; iv. 41. 2; v. 34. 8 (*bis*); 36. 6 (*bis*); 37. 5; 47. 3; 60. 1; 68. 4; vi. 59. 5; 66. 14 (*bis*); vii. 70. 4; 84. 2; 93. 2; viii. 35. 4, 5, 6; ix. 70. 4; x. 65. 5; 113. 7; besides 55 occurrences in C, and C. In all, 83 exx., of which Lanman gives 2 on p. 346, 48 on p. 341, 4 and 28 on p. 570. The form *astāu* 'eight' is not included: see below § 272.<sup>2</sup>

§ 149. The dual in *-ā* (masc.). This is a genuine old form, of which there are 17 occurrences, all in A.<sup>3</sup> *-ā* at the end of an odd *pāda* before *r* (ii. 3. 7) is a graphic peculiarity; *-ā* shortened where it stands before another vowel with biautns (vi. 63. 1; 67. 6) is in accordance with general rules; see above § 144. The numeral *astā* appears as a dual in RV., and the form *astā* rests only on the authority of the *padapātha* in x. 27. 15. In the compounds *indra-nāyā* 15, *mitrarājānā* we find *-a* rather later.<sup>4</sup>

<sup>1</sup> Lanman's list includes the pronouns *imaū*, *etaū*, *taū*, *yāū*, etc.: but we have to add *kaū* x. 60. 11.

<sup>2</sup> See Table § 164.

<sup>3</sup> Lanman, p. 342.

§ 150. Instrum. etc. dn. For the form *-bhūm* see above § 89.

§ 151. The gen. loc. dn. is found occasionally in *-oh* (Lanman, 344). This variant possibly belongs to the periods A B only.<sup>1</sup>

§ 152. Nom. voc. plur. mase. in *-āsh*. (Lanman, pp. 344 seq.) Even in period A the form *-āh* is half as common again; in B, and B<sub>2</sub>, it is twice as common: in C *-āsh* rapidly dies out.<sup>1</sup>

In several passages Lanman suggests that *-āsh* should be read by way of emendation for *-āh*: but it seems hardly probable that any Vedic recension should have removed in some half-dozen verses a form which occurs more than 1000 times in RV. For *āgnāgvatamāh*, which is clearly the correct reading in v. 41. 4, cf. above §§ 130, 143 (h). In iv. 37. 4; v. 41. 9; vii. 35. 14=x. 53. 5; x. 78. 6; x. 94. 11, the alteration is somewhat favoured by the metre, but in four cases out of the five the defective syllable is missed at the caesura, and a metrical irregularity is therefore not improbable: whilst in the remaining case (v. 41. 9) even the proposed correction would not give a regular verse.

In these passages the correct number of syllables can also be restored by our reading *-āah* or *-āāh*: but even so this would be no evidence of an earlier form, since the few examples are scattered over all parts of the RV. For the supposed trisyllabic forms of *devāh*, *dānāh*, chiefly found in very late hymns, any explanation must be looked for in the first syllable.

For a form in *-asuh* there is even less warrant. *Kiistāsh* in the two passages quoted by Lanman probably has *i* resolved (see above § 68), but is otherwise regular: *durgatāsh*, ix. 101. 12, presents no metrical difficulty.

Finally Oldenberg, *Proleg.* p. 176, suggests in a number of cases the resolution of the *ā* in *-asuh*. Of these i. 127. 7; vi. 67. 10, in which *kiistāsh* is to be read, have been already referred to. In vi. 44. 8 the metre is Virāj: in vi. 63. 7 *āgnāsah* is preferable.<sup>2</sup> In the five following passages *mārtiāsh* is to be read, see above § 143. Most of the remaining passages admit of similar explanations.

If the RV. gives any trace of an earlier form, it must I think be in the refrain of the Gr̄tsamadāh, *brhād vadēna vidūthe svit-rāh*: the double use of which, namely both in Triṣṭuhh and Jagati verses, may very possibly be traditional.

§ 153. Nom. pl. fem. in *-āsh* (Lanman, p. 362). This is rare, and if anything less common in the earliest period. As almost all the forms are adjectives or participles, the question seems to be one rather of syntax than of accident, and the Greek adjectives of two terminations may be compared.

Where the resolution *-āah* is proposed, we can in viii. 04. 8 read *us(a)rdh*: the other instances suggested by Lanman are in hymns of the latest period, and at any rate have no historical value. The irregular value of *vaydh* vii. 40. 5 is noticeable, but as it corresponds to *vaydm*, i. 165. 15, the termination is not concerned.<sup>3</sup>

<sup>1</sup> See Table, § 164.

<sup>2</sup> See above, § 85.

§ 154. Acc. pl. maso. and fem. The form *-ān* shews no resolution of *-ā*: in the words *gukrā devū* the resolutions *guk(a)rā*, *dayivā* are always more probable: in x. 93. 2, *b* and *d* resolutions must perhaps be looked for, but cannot be relied upon. For the feminine *-āh* resolution is only slightly more probable. Lanman<sup>1</sup> suggests five passages: in viii. 46. 26 *usardāh* is more probable; in i. 63. 5 and iv. 26. 7, the resolution of the first vowel in *kāsthāh*, *murdāh* respectively. But in the last two instances the resolution of the *-ā* of the suffix is not unlikely, and it seems required in *kāah* vii. 60. 9 and *manis̄hāh* x. 26. 1. Yet at the most we have 4 exx. out of almost 400 occurrences.

§ 155. Nom. acc. pl. neut. It is not till the period C, that the form in *-āni* is equally common with that in *-ā*. The accretion of the *-ni* seems precisely parallel to that which occurs in 1. sing. subj. of verbs. There is no transition to the *-an* declension, for the neutrals of that declension are far less numerous, and themselves make the same change.<sup>2</sup>

Of the combinations *-ā -āni*, *-āni -ā* at the end of successive words, the former is more common in the later period: this perhaps points to a tendency towards the formation of compounds.

The emendation of *-ā* to *-āni* makes the metre smoother in several passages (Lanman, p. 348): yet it is *a priori* in a high degree improbable. For *ukthāh* viii. 2. 30 the simplest alteration is to *ucāthāh*: see above § 143(f).

The shortening of final *ā* before another vowel, with hiatus, e. g. ix. 88. 2<sup>3</sup>, does not point to a form in *-ā<sup>4</sup>*: *āha* is probably felt as from a stem in *-an*.

§ 156. Instrum. plural m. and n. The form in *-aih* is more common throughout the RV.: but its progress is not quite regular, for it is relatively least common in B.<sup>5</sup><sup>6</sup>.

Resolution of *ai* in *-aih* is discussed by Lanman, p. 350: in ii. 11. 2; v. 4. 7; x. 24. 2 *ucāthaih* is probable: again, in i. 129. 8 *at(a)raih*: but in viii. 90. 10; 92. 13 the resolution of *ai* seems to be required. See also § 72.

§ 157. Dat. abl. pl. in *-ehhiah*. See above § 99.

§ 158. Genitive plural m. n. (Lanman, pp. 351 seq.). For the forms in *ānaam* see above §§ 61, 73. For forms in *-anām* there is no evidence at all.

§ 159. Genitive plur. in *-ān*. Such forms, though rare, undoubtedly occur in the earlier parts of the RV., as also in *-ūn* from one *-u*-stem, and in *ṛn* from one stem in *ṛ*. There seem to be also a few forms in *-ām*, but these are less certain. The occurrences noted are: *jánān* i. 50. 6; *devān* i. 71. 3; vi. 11. 3; x. 64. 14; and almost certainly in vi. 51. 2 as emendation: *mānuṣān* i. 50. 5; *manusyān* vi. 47. 16; *máritān* iv. 2. 3, 11; *rāhān* ii. 8. 1; *aktān* x. 1. 2; *nṛn* i. 121. 1; iii. 14. 4; iv. 2. 15; v. 7. 10; *carāthān* i. 70. 3; *yūthān* Vāl. 8. 4; *vanān* x. 46. 5; *gāsān* ii. 23. 12; *hīnsānām* x. 142. 1.<sup>7</sup> This last instance, the only one in C, may, as Lanman (p. 353) suggests, be a *haplographia*.

<sup>1</sup> P. 363.

<sup>2</sup> See Table, § 164.

<sup>3</sup> Lanman, p. 348.

<sup>4</sup> See § 144d.

<sup>5</sup> See § 45.

§ 160. The nom. sing. fem. in -ā several times occurs with shortening and hiatus before the initial vowel of the next word: and it stands in contrast to the dual in -ā, not (as Lanman, p. 356) in the greater frequency of hiatus (for we cannot tell how often āv of the text may not represent an original hiatus), but by its conforming more often to the rule *vocalis ante vocalem*.

Lanman doubtfully suggests resolution to -aa in three passages: in vii. 75. 4, such resolution would be unmetrical, and in the very late hymn x. 162. (1. 2) it certainly has no historical importance.

§ 161. Resolution of the acc. fem. sing. seems possible in i. 173. 2; iv. 30. 9; viii. 61. 7: for *kāsthaam*, vii. 93. 3, see above § 65: for *vayām* i. 105. 15, above § 103. Cf. acc. pl. fem. above § 154.

§ 162. Feminine dative forms in -yai (Lanman, p. 350) may suggest an earlier formation: but they occur twice only, in period B, (i. 54. 11; 113. 6). The whole group of forms in -āyai, -āyāh, -āyām is comparatively rare in period A: see below § 108.

§ 163. Other feminine forms have been discussed above in connection with the corresponding masculine forms. Of masculine words in -ā (except ā radical) we have only the slightest traces in RV.: e. g. *uṣāṇā* pr. n. (Whitney, Gr. 355a).

§ 164. Table shewing flexional forms from stems -a, -ā.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
	-a, -ā stems, etc.								
145	Instr. masc. in -ā.....	47	7	11	18	1	..	..	1
	" neut. " : <i>mahītā</i> .....	10	6	12	18	3	2	7	13
	" " " remainder .....	11	3	10	13	1	..	2	3
	" all m. n. in -ā .....	68	16	33	49	5	2	0	16
	" m. n. in -ena (-end) .....	193	106	199	304	74	64	570	717
146	" fem. in -ā (" homophous") .....	108	36	67	108	14	4	3	26
	" " " -ayā .....	158	58	87	145	29	30	116	175
148	Dual n. v. a. in -āu (all stems) .....	11	5	12	17	35	20	820?	375?
149	" masc. in -ā .....	17	..	..	0	..	..	..	0
	" " in compounds .....	18	..	2	2	1	..	..	1
151	" gen. loc. in -āh .....	3	1	3	4	..	1	..	1
152	Nom. pl. masc. in -āsaḥ .....	492	173	282	455	89	22	57	168
	" " " in -āḥ .....	774	390	600	990	257	177	1360	1800
153	" " fem. in -āsaḥ .....	5	..	7	7	2	..	4	6
155	" acc. pl. in -ā .....	610	251	424	675	110	24	172	306
	" " " -āni .....	278	141	268	409	84	25	273	387
	" " " combin. -ā-āni .....	54	25	45	70	16	9	?	75?
	" " " -āni-d .....	73	22	35	57	12	8	?	45?
150	Instr. m. n. pl. in -ābhīḥ .....	262	91	157	248	26	12	43	81
	" " " -āiḥ .....	304	142	178	320	40	26	220	292
159	Gen. pl. in -ān, -ān, -ān .....	8	3	4	7	..	..	..	0
	" " -āni .....	1	1	2	3	1	..	..	1
163	Masc. nom. s. <i>uṣāṇā</i> .....	2	8	3	0	..	..	..	0

## B. Radical stems in -ā, -a.

§ 165. There are numerous nouns in the Veda, chiefly compounds, in which the final syllable appears to be identical with a verbal root in -ā or -a: of these some are declined entirely like nouns in suffixal -a -ā: others shew a distinctive scheme of declension, similar to that of other root-nouns.

The distinctive forms most commonly found are the nom. voc. aco. masc. and fem. singular and dual, and the nom. voc. masc. and fem. plural: and they are almost entirely confined to monosyllables and adjectives.

It is reasonable to conclude that we have here the remains of a noun-system with stem ending in -ā for the strong cases, -a for the weak cases and the neuter gender. The forms with -a stem fell under the influence of the declension in suffixal -ā in the masc. and neut. genders; those with -ā stem, under the influence of that in suffixal -ā in the feminine: with the result that the declension as a whole became confused and perished, whilst many words passed completely to the suffixal declension.

§ 166. Before attempting to trace the history of any change or transition that may have taken place in the period of the RV. and AV., it is necessary to ascertain how far the transition (if any) was completed before the earliest period of the RV.

Putting aside more or less isolated occurrences, we find first that neuter substantives and adjectives follow entirely the suffixal declension. Examples are very numerous: e. g. *khā*, *dyukṣā*, *sunñā*, *vṛtrahā*, *antārikṣā*.

So also do feminine substantives of more than one syllable: e. g. *prajā*, *svadhā*, *graddhā*. Lanman infers for some words of this type a nom. sing. in -ā, e. g. *godhā* x. 28. 11, *svadhā* i. 165. 6: but his argument (p. 445) seems to me to lack solid foundation. To this class also belong *dhyā* and 2 *jyā*, both probably originally disyllables: and (apparently) the feminine adjective compounds of *gopā*.

§ 167. Nor are examples wanting in the masculine gender, chiefly substantives: all compounds in -ga, viz. *atithigvā*, *etagvā*, *dāçagvā*, *nāvagvā*, and *purogavā*: some in -ga, *patangā*, *samgā*, *sugā*, and *svargā*: and besides these *dyukṣā*, *triṣṭhā*, *goṣṭhā*, *saṁsthā*, and *sukhā*. In some other words which occur but rarely, e. g. *ajā*, *ekajā*, the hypothesis of transition within the Vedic period is not inadmissible: but the occurrences are not included in the tables.

§ 168. The words that remain shew in the great majority of instances forms that are either distinctly radical, or are common to the radical and suffixal paradigms. They are chiefly monosyllabic masculine and feminine substantives, as *gā*, *ddā*, *kṣā*, *gnā*: and participial compounds ending in -gā, -jā, -dā, -dhā, -pā 'oversee,' -pā 'drink,' -sū, -sthā. Full particulars are given by Lanman, pp. 434-453.

§ 169. The distinctive forms in more or less regular use are as follows: nom. voc. sing. m. and f. in *-āh*, *-āah*: acc. s. masc. in *-ām*, *-āam*, fem. in *-āam*: dat. sing. m. in *-e*, *-ai*: gen. abl. s. m. and f. in *-āh*, *-āh*: nom. voc. acc. dual in *-āā*: nom. voc. maso. and nom. voc. acc. fem. pl. in *-āah*: and masc. instr. pl. in *-ābhīh*, dat. ahl. pl. in *-ābhyaḥ*, loc. in *-āsū*.

The resolved forms are fairly common in this declension; see above § 63: and since they are rarely if ever found in the suffixal declension, we need not hesitate to treat as distinctive such forms as do occur. In the weak cases we find both *-a* and *ā*: of these only the first can claim to be primitive.

Closely parallel to the case formation is that of the superlatives in *-ātama*.

Forms in use common to both declensions are: acc. fem. sing. in *-ām*; duals in *-ā*, *-āu*: nom. masc. and fem. and acc. fem. plural in *-āh*: the occasional resolution *-āah* seems to vouch for the last as a radical form. The extreme rarity of some cases is remarkable, especially the locative singular and the acc. maso. plural.

The tables shew the history of the distinctive radical forms as enumerated above: it appears that the nom. sing. m. and f. is equally common in all parts, the acc. masc. is most common in periods B<sub>1</sub> and B<sub>2</sub>; for which an explanation is not easy to find. Of the other forms some are more common in A, some in B: but owing to the small number of occurrences, all that can be safely affirmed is that all are practically confined to these periods, and have disappeared in period C.

In AV. hardly any radical forms are found except the nom. sing. masc. and fem. of participial adjectives.<sup>1</sup>

§ 170. It appears then that not much room is left for transition within the Vedio period. The following are possible instances in the cases as yet discussed:

Nom. sing. m.: *agregāh* ix. 86. 45; *adhrīyah* (?) v. 7. 10; *anānudāh* i. 53. 8; ii. 21. 4; 23. 11; *dānuddāh* ix. 97. 23; *apna-sthāh* vi. 67. 3; *purunīsthāh* v. 1. 6; perhaps *paçusdh* v. 41. 1; and about 22 examples in AV. and two vocatives.

Nom. sing. fem.: *madhudhā* iii. 61. 5; *sanajā* iii. 39. 2; about 10 exx. in AV.

Acc. sing. m.: *anānudām* x. 38. 5; *gopām* x. 61. 10; *trisīhām* i. 84. 5; *madhupām* v. 32. 8; and 4 exx. in AV.

Dat. s. m.: *rathesthāya* viii. 4. 13.

Abl. s. m.: *ṛgyadāt* x. 39. 8.

Nom. fem. dual *pūrvajē* vii. 53. 2; *su-āsasthē* x. 13. 2.

Nom. pl. masc.: *priyasdāh* ix. 97. 38.

Instr. pl. masc.: in *-ebhīh*: *tuvigrēbhīh* i. 140. 9; *mithō-ava-dyapebhīh* x. 67. 8; *ratnadhēbhīh* iv. 34. 8; 35. 7; and one in AV.

Ditto: in *-aih*: *ātaih* ix. 5. 5; and *dhanasaih* x. 67. 7.

Dat. pl. masc.: *pūrvajēbhyaḥ* x. 14. 15.

<sup>1</sup> See Table, § 175.

Loc. pl. masc. : *dravīṇodēṣu* i. 53. 1.<sup>1</sup>

§ 171. Although these forms are not very common, the table shews clearly that their use increases steadily: and the forms of the weak cases (10 in RV.) are relatively, though not absolutely, far more common than those of the strong cases (18 in RV.). Further we have the following "suffixed" forms in cases in which no certain and distinctive radical forms occur:

Instr. sing. fem. : *kṣmayá* i. 55. 6; v. 84. 3; vii. 46. 3; x. 61. 7; 89. 3.

Accns. pl. masc. : *tupojā* x. 154. 5; *ṝtāpā* x. 27. 6; AV. 2.

Gen. pl. masc. : *sākūnijānām* i. 164. 15; *driḍhānām* AV.

The acc. fem. pl. forms in -āḥ seem not rightly reckoned as suffixed forms, as there are several instances of resolution; cf. the voc. masc. sing. But it will still be the case that in the RV. transition is fairly actively at work in the weak cases of participial compounds, and that in AV. it begins to affect the strong cases.

§ 172. The abl. neut. sing. occurs with ā apparently resolved in *antārikṣāat* x. 158. 1; and *sadhuśthaat* viii. 11. 7: and once only from an -a stem, *parākāat* x. 22. 6 (Lanman, p. 338). As however in the other cases generally the neuter nouns have gone over to the suffixed declension, these resolutions can hardly be signs of a radical declension.

§ 173. We have also a few masculine nom. forms used as neutrals, quoted by Lanman, p. 445. Like the fem. nom. pl. in -āsaḥ, these forms represent a syntactical experiment: we may compare the Latin *felix audax*.

§ 174. For the monosyllabic infinitives in -ai, see below § 356.

§ 175. Table shewing distinctive forms from stems in radical -ā, -a.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
169	Nom. sing. masc. in -āḥ, -āaḥ	98	60	75	185	24	15	55	94
	Voc. " " " "	18	2	1	3	--	--	--	0
	Acc. " " -ām, -āam	31	25	39	64	11	4	9	24
	Gen. " " -āḥ, -āḥ...	1	--	1	1	--	--	--	0
(a)	Plural -ābhīḥ, -ābhyaḥ, -āsu	4	--	2	2	--	--	--	0
	Superlatives in -ātama	25	1	3	4	--	--	--	0
	Dual and nom. pl. masc. resolved	8	1	1	2	--	--	--	0
	Dative singular in -e	3	2	3	5	1	--	--	1
	All forms in (a)	90	31	50	81	12	4	9	25
(b)	Nom. sing. fem. in -āḥ, -āaḥ	5	3	5	8	5	--	5	10
	Gen. abl. sing. in -āḥ, -āḥ	4	3	5	8	1	--	--	1
	Nom. acc. du. pl. resolved	4	1	1	2	1	--	--	1
	All forms in (b)	18	7	11	19	6	1	5	12
	All radical forms	201	68	136	234	42	20	69	131
170	Suffixal forms of above cases..	8	5	13	18	2	--	39	41
171	Instr. s. fem.: acc. pl. masc.: gen. pl. masc.: suffixal forms	2	--	8	8	2	1	3	6

<sup>1</sup> See Table, § 175.

## C. Stems in -i, -ī, -ī, -u, -ū.

§ 176. On account of numerous parallelisms it is convenient to consider these stems together. By -i stems we denote Lanman's B class, or derivative -ī stems, whether oxytone or not : by -ī stems, Lanman's C class, the radical class of classical Sanskrit. In some cases the gender influences the form, and it is an open question whether the feminine abstract nouns in -ī did not originally form a distinct class. The words *juny-*, *paty-*, *sukhy-* have a peculiar declension in more than one point, and perhaps should be classed together as a -y class.

Where the stem-vowel is followed by another vowel it may or may not retain its syllabic character : in the -ī-ā declensions it almost invariably does so ; but in the -u stems, very seldom. The character of the preceding syllable often determines this point, and it has therefore been treated above, §§ 81, 82, 86, 97, 98, and will only be referred to incidentally now.

## C. i. Stems in -i, -ū.

§ 177. Nom. sing. masc. fem. From stems in -i, -ū, nominatives in -ih, -uh are regular : but ví 'bird' has nom. s. vīh five times, in various parts of RV. : so once āpēh x. 83. 6 (Lanman, p. 375). From -ī stems nom. -i is regular, connecting this declension with that in suffixal -ā. Feminine nouns somewhat confuse the stems : thus from jāni (or jany) we have jānti ; from bhāni, bhāniṣ regularly, but once bhāni (and so in some other cases) : from árati varlāni, once each, forms in -ih. All these variants are merely sporadic.

§ 178. Acc. siog. mase. and fem. The regular forms are -in, -um respectively : and from -i stems -im. A few variants similar to those of the nominative case are mentioned by Lanman (pp. 378, 407), and have no importance.

§ 179. Nom. acc. sing. neut. The stem is used without case-ending. The -u form occasionally appears as -ū : urā, purā 12, mithā 2. The occurrences are most often in period A.<sup>1</sup>

§ 180. Istrum. sing. masc. and neut. The forms are -iā, -yā, -inā : (-uā), -vā, -undā respectively. For the value of the semi-vowels see above, §§ 82, 97. For an isolated and doubtful form in -i, see Lanman, p. 379.

As far as the -i stems are concerned, -inā is established in the whole Vedic period, except that the stems *paty-*, *sukhy-* shew pátyā, sákhyā : as is also the case in classical Sanskrit. The development of the form in -inā from an earlier -iā, -yā cannot be looked upon as a transition to the unimportant -in class : the use of the -n element is parallel to its use in the -a declension. Only a few isolated stems besides those named shew occasional -iā, -yā in Veda. The following forms may be considered as

<sup>1</sup> See Table, § 210.

representing such change as was still in process : *pálinā* iv. 57. 1 and AV. twice : *bṛhaspátinā* viii. 85. 15 ; x. 68. 10 ; and AV. 5 times : *gópatinā* AV. : *rayinā* x. 122. 3. None of these forms occur in period A.

The -u stems present a different picture. The whole number of forms in -unā is indeed the same in all periods : but the forms in -vā rapidly diminish in number, and forms in -unā from the same stems increase. As transition forms we can recognize particularly *krátunā* 12, and *pagunā*, and *mádhund* (nent.).<sup>1</sup>

§ 181. The corresponding feminine nouns in -i shew regularly -i in periods A B, and -ī -yā in period C. A form in -i is not uncommon in the earliest hymns. It is then plain that -i is not the result of contraction ; -i -ī are the earliest forms, and the latter corresponds to the 'homophonous' instrumentals of the -ā class. Two forms quoted in -inā are presumably accidental. From tho -u stems we have hardly any forms : but a few adverbs in -uyā appear in all parts.

As distinctions of gender do not directly influence declension (except in the nenter nom. voo. acc.), I hazard the conjecture that the forms in -i -ī originally belonged only to the *nomina actionis* in -ti : and that the instrumental in -ti existed first as a gerund, and only gradually developed a full declension. The change from -ti to -ī may in that case be due to the influence of the 'homophonous' instrumentals.

From feminine stems in -i we have -iā -yā regularly, -ī -i only in the case of *glimī*, *suglimī*, which are also *nomina actionis*.<sup>1</sup>

§ 182. Dative feminine singular. In the periods A and B the forms *ūtī*, *vittī* are used as datives or infinitives, and *suastī* is used in the same way in all periods, though the instances in AV. have not been collected. The forms are no doubt the same as the instrumental forms in -i, -ī.<sup>1</sup>

§ 183. Dative masc. neut. We may assume for the moment on the analogy of the instrumental forms older forms in -ye, -ve : later in -aye, -ave. If this is a true account the change was complete in the -i declension before the Vedic period, only the -y stems *paty- sakhy-* shewing tho forms *pátye*, *súkhye*, as is also the case in classical Sanskrit. The -u declension again lags behind, and gives us several forms in -ue, -ve, but only rarely after period A. Datives nenter hardly occur, but the normal forms for the Veda are doubtless -aye, -ave. Of the later declension in -une we have two examples : *mádhune* iv. 45. 3 (in an early hymn), and *kaçipune* AV. The feminine datives all give -aye, -are.

§ 184. Abl. gen. sing. and nom. voo. acc. plural, masc. and fem. We have two forms in -yah, viz., *aryāyah* *aryah*. These we may again suppose to be older forms: to the corresponding forms in -vah the -u declension adheres as usual till a later period. Such

<sup>1</sup> See Table, § 210.

forms are not found from the stems *jany-*, *paty-*, *sukhy-*, although in the plural nom. at least the metre would have preserved them: and this difference forbids us to identify these stems altogether with the older *-i* declension. The forms are distributed as follows: *aryāḥ* gen. sing. 38, nom. pl. mase. 16, fem. 4, acc. pl. mase. 7, fem. 4; *āvyāḥ* gen. sing. 18: in all, 87 examples.

The *-u* stems correspond as far as the plural is concerned. Exx.: *mūḍhṇah* nom. pl. mase. 4; fem. 1: acc. pl. fem. 2; *vībhvah* n. voc. pl. mase. 3: *yatukruteah* voc. pl. fem.: *patigrāhi* acc. pl. mase. 4. *kītrah* acc. pl. mase. 2; in all, 17 forms.

In all these forms resolution of *y v* is rare: the forms in *-yah* are far more common in period A than later: those in *-rah* are equally used in periods A and B.<sup>1</sup>

§ 185. Ahl. gen. sing. m. f. of *-u* stems. These are also regularly formed in *-oh*: the forms in *-rah* are only about one-sixth of the whole, but they are formed from several stems. They are equally common in periods A and B, and then disappear rapidly: all happen to be masculine. The form in *-uah* is conjectural. A form in *-unah* occurs once in viii. 5. 14.<sup>2</sup>

§ 186. The history of the neuter forms (chiefly those from *mādhu-*, *vīśu-*) is perplexing. The form in *-uah*, which is that of classical Sanskrit, appears as a decaying form, and is entirely absent in period C. The form in *-uah* is far the most common in A and B, including about three times as many occurrences as that in *-oh*, but in C the proportions are reversed. To restore *-uah* for *-unah* in the text throughout would give this case a more consistent development; but the change cannot be supported by any proof or analogy in the RV.: on the contrary the n. pl. in *-āni* is further evidence for the early occurrence of the *-n* forms.<sup>3</sup>

§ 187. Locative singular. From *-i* stems the principal forms of the locative are *-ā* and *-au*. The figures shew that *-ā* is the earlier form, and gradually gives place to *-au*: but the locatives in *-au* are relatively much earlier than the duals in *-āu*. Before vowels *-āv* appears regularly, except before *u*, where *-ā* stands, as with duals: but at the end of the *pāda* (whether odd or even) *-au* is always written.<sup>4</sup> These forms therefore have no value in the RV. as indications of date: at the same time it seems highly unlikely that the hymn-writers of period A wrote *-au* regularly at the end of the *pāda*.

The relationship between these forms has been clearly stated by Lanman, p. 387, who has successfully refuted the hypothesis that the *-au* form is due to the influence of the *-u* declension: on the other hand he has failed to shew any relation between the *-au* form and an initial labial.

The restoration of a locative in *-ayi* (Lanman, p. 388) is very doubtful, especially as amongst the examples given no locative form appears (except by an unnecessary conjecture) in iambic cadence.

<sup>1</sup> See Table § 210. <sup>2</sup> A few exceptions are given by Lanman, p. 386.

There are a few locative forms in -i from fem. stems in -i -ī.'

§ 188. From -u stems -au is the regular form of the locative for all genders. But we find -avi (m. and n.) in period A, and the form sāno in B.; and an occasional neuter locative in -āni.'

§ 189. In three passages -u stems form n. v. a. dual in -uvā, -vā.

§ 190. Nom. acc. pl. nenter. We have the endings -i, -ī, -āni: -u, -ū, -āni: from the numeral tri, trī, trīni. None of the forms from -i stems are very common: the -i form is rare and only occurs in period A: trī gives way gradually to trīni. But with regard to other stems the forms in -i and -āni seem equally common (or, we may say, equally rare) in all periods.

The forms in -u and -āni are about equally common in A, and that in -āni grows steadily in favour. The form in -ū is most common in period B. But the whole number of forms is much less in period C, as are also the forms of the abl. gen. sing.: and indeed the -u stems as a whole fail to maintain their ground in Sanskrit.'

§ 191. Thns, as compared with the -i stems, those in -u, whilst in many points more conservative, more readily admit the -n element in the ahl. gen. loc. sing., and in the nom. acc. plural, but always in the neuter gender. The cause is entirely obscure.

§ 192. We appear to have an accusative masc. pl. vāyah i. 104. 1, and fem. citrōtuyah x. 140. 3, pūcayah AV. (Lanman, p. 395). None of these occurrences are early or of importance.

§ 193. As instr. pl. īti is found ten times, chiefly in A.<sup>1</sup>

#### C. II. Stems in -i.

§ 194. Like the stems in -ā, these are almost entirely feminine, and many are adjectives. The corresponding nominative form for the -u stems is -vī, and the declension is the same as for -i nouns.

§ 195. A few masculine stems occur: the proper names tirac̄ī, nāmī, pṛthī, mātālī and sbbhārī: the *nominā agentis* rāṣṭrī 'ruler,' sīrī 'weaver,' and probably etārī 'racer': and the dual form mādhvī, an epithet of the Aśvins. After period A only the nom. sing. appears of some of the proper nouns, and that but rarely: for the instrum. nāmyā i. 53. 7 is not a distinctivo form. Sbbhārī and pṛthī have supplementary case forms of the -i declension.'

§ 196. For the forms of the nom. acc. instrum. sing. see above §§ 177, 178, 181: for the dat. gen. abl. loc. singular, below § 198. The n. v. a. dual has in RV. always the form -i: the nom. pl. -ih: but later the forms of the -i declension -iū(-yā) and -iāh(-yah) replace these.

§ 197. Feminine stems in -i are almost as common as those in -ī, and the number of forms is even slightly greater (about 3100 to 2800). Still the -i stems having acquired a distinctively feminine character encroach upon the former: and more particularly

<sup>1</sup> See Table § 210.

in the dat. gen. abl. and loc. sing.: see below § 198. Change in the opposite direction is possible (Lanman, p. 372): but it is much less common: and therefore for the purposes of the RV. we may reckon *aranyāñi* as an -i stem: and so too (with Lanman) *yuvatī*.

The changes outside the cases named are: nom. s. -i 2, abl. du. i: nom. voc. pl. -ih 12, in AV. 9: loc. pl. 1: about one-half of the occurrences are in C, and AV.<sup>1</sup>

§ 198. The group of case-endings for feminine stems, consisting of dative -yai, abl. gen. -yāh, loc. -yām, claims special attention: and should be compared with the corresponding groups -āyai, -āyāh, -āyām of the -ā declension, -ayai, -syāh, -syām of the pronominal declension.

The first-named group is regularly used for the -i declension, but the forms from the stem *prthivī* are comparatively so numerous that we reckon them separately. The forms from feminine stems in -i, at first rare, become in the AV. about equally common.

In each group we find the same remarkable development: twice as many forms in B as in A, and (except as to the word *prthivī*) three times as many in C as in B. We have then the right to assume that these forms are just nascent in the first period of the RV.: and, since about half the forms in that period belong to the -i declension, that the group had its beginnings there. In that case the y must be originally the thematic vowel, and the pronoun-declension one using a special -i stem in these cases.<sup>2</sup>

§ 199. Consonantal y is everywhere the rule, and presumably original, except perhaps in the locative: in that case we must assume a double stem -i, -ī for these nouns, the latter of which took consonantal value before vowels. Another trace of an earlier -i stem in these weak cases is found perhaps in the form *nāribhāh* from *nārī*.

The variants in i (for y) are undoubtedly favoured by a preceding heavy syllable: thus the forms in -iāi, -iāh are 27% of the whole after heavy syllables of -i -i stems; but only 11% after light syllables (except *prthivī*): those in -iām 50% and 17% respectively: and in the case of the pronouns (after the short syllable) the i forms are hardly found. But the forms *prthivīai*, *prthivīāh* are 23% in period A, or twice as frequent as is the rule: whilst afterwards they almost disappear: and the form *prthivīām* is notably rare throughout. Thus this single word has a consonantizing tendency, which is progressive: whilst nowhere else is continuous change perceptible, either in the direction of consonantization or the reverse.<sup>3</sup>

<sup>1</sup> See Table, § 210.

<sup>2</sup> See Table, § 105.

## C. iii. Stems in -i, -ī.

§ 200. These stems are declined with great regularity. In the strong cases the thematic vowel, except in a few compounds, bears the accent : and in the weak cases also, except that monosyllabic stems are oxytone. It is no doubt due to the accent that the thematic vowel is very rarely consonantized, but is "split" or shortened before an ending which begins with a vowel. There is no locative singular ; cf. radical stems in -ā, -a, § 169.

§ 201. Both declensions are, according to analogy and also according to the classical usage, declensions of radical nouns. But the Rig- and Atharva-vedas contain a considerable number of polysyllables in -i belonging to this declension. All of them have the accent on the thematic vowel, and in this we have the origin of the formation, which however does not establish itself permanently, except in the n. v. a. dual, and the nom. plur. Most of the stems are feminine : but as the masculines include one very common word *rathī*, the number of occurrences from masc. stems is still considerable.

§ 202. Masculine polysyllabic stems in -i are given by Lanman, p. 369. Of these *nauī dākṣī* have no distinctive forms ; but *yayī* may fairly be included. The metre also favours *svarī* in i. 61. 9, to correspond to the feminine formation ; but I have not included this in the enumeration. The comparative and superlative forms in -īvara, -ītama may be added.

The distinctive forms are : nom. sing. -īh 24 and AV. 3 : acc. s. -īam 9 and *yayīam* : dative s. -ie 2 : gen. s. -īah 2 : n. v. a. dual -īū 11, AV. 1 : nom. pl. -īah 18, and *yayīyah* : acc. pl. -īah 4 : instr. pl. -ībhīh 1 : comp. *rathīvara*, sup. *rathītama* 11.

The forms become rare after period B.

The only one of these stems that has parallel forms in -ī is *yayī*, and these forms (5) occur in periods A and B. The words therefore tend to disappear altogether.<sup>1</sup>

§ 203. The feminine stems of the -i declension are given by Lanman, p. 368. To his list may be added *prīgant* and *suparnī* : and *tapant* *gakṣī* may be withdrawn from it. Two distinctive cases are as follows, omitting those in which the distinction is a matter of accent only : nom. s. -īh 33 : acc. s. -īam 18, besides *umbīam* and *staryīam* : dat. s. -ie 5 : gen. s. -īah 9 : voc. s. -i 3 : n. v. a. dual -īū 11 : nom. pl. -īah 23, besides *prīganiah* and *suparnīah* : -īyah 1 : -ydh 1 : acc. pl. -īah 19, and *suparnīyah* : -īyah 2 : -ydh 1 : in all, 131, besides 58 in AV.

These forms as a whole increase notably within the Vedic period : and this increase, as contrasted with the decrease of the masculine forms, points to a progressive identification of the stems in -i and ī, and the recognition of both as distinctly feminine : the importance of the accent being now less felt.<sup>1</sup>

<sup>1</sup> See Table, § 210.

§ 204. Two cases form an exception: the genitive and dative singular, never common, disappear in C, and the AV. Of the ablative and locative singular no forms exist at all. Thus the field is left entirely open to the forms in -yai, -yāh, -yām, for which see above, § 108. A few of these forms appear in RV.

§ 205. Parallel forms belonging to other declensions occur as follows: nom. sing. in -t once in RV., 10 times in AV.: acc. s. in -tm once in AV.; gen. -āh, once in AV.; loc. in -t in *gaurī ix.* 12. 3; in -idm, *dūtidm vi.* 58. 3 (cf. *grīydā* once in AV.); nom. pl. in -th twice in AV.: acc. pl. in -th *arunīth i.* 112. 19, iv. 2. 16, *yātudhānīth* once in AV. Except as regards the nom. pl., all these changes point in the direction of the subsequent fusion, though none but the nom. s. are of importance. On the other hand n. v. a. dual in -t is only found in period A (4 times), where -in occurs but twice: it may therefore represent an earlier formation: nom. pl. in -āyah occurs three times, *armūiyah* x. 95. 6, *ambāyah* i. 23. 16, *kṣonāyah* x. 22. 9, the last only being an early hymn. B-forms also occur from ēnī, sīnī; from the accent we may infer perhaps another form of the stem in these words.

§ 206. Many root-nouns belong to the -u declension in RV. (Lanman, p. 401); amongst them are to be reckoned *prabhū* and *āprabhū*. Occasional -u forms are also found from *ābhū* 2, *purubhū*, *mayobhū* 7, *vibhū* 10 (excluding *vibhū* as n. pr.), *cambhū* 4: and once each from *sabardhū*, *dhījū*, *āyū* (fem.): in AV. once each from *abhibhū*, *paribhū*: in all, 29 exx. We have no reason to doubt that transition took place in the direction of the -u declension in these words, but it does not appear markedly in any one period.<sup>1</sup>

§ 207. In spite of the analogy of both the -t and -i nouns, non-radical stems in -ū are rare. Of masculines we can count only *kṛkadāgū* i. 29. 7, and *prāgū* i. 40. 1; although a similar adjective *makūtū* can be inferred from the superlative *makṣitama* viii. 19. 12, ix. 55. 3. Besides these we have compounds of *tanū* retaining -ū, once in RV. (*ātaptatanū* ix. 83. 1), and in AV. in one hymn *sūrvatanū* many times.

§ 208. There are a few feminine polysyllabic substantives in -ū. Of these 2 *juhū* 'sacrificial ladle' and *tanū* are found throughout RV. and AV.; *camū* and 1 *juhū* 'tongue' are early words: *vadhū* and *gvagrū* are more commonly late. Feminine adjectives, especially those corresponding to masculines in -nū, -yū, -sū are fairly common: but the occurrences are few, and are almost confined to the nom. and acc. sing., and the nom. plural. There are also a few proper names.<sup>1</sup> In the AV. we have a few feminine forms in -vāi, -vāh, -vām, in imitation of the forms -yai, -yāh, -yām from -t stems: but in RV. there is only one certain example, and that in a hymn of the latest date.

<sup>1</sup> See Table, § 210.

§ 209. There are no other developments of importance in these declensions: the irregularities of the words *arāni* (or -i), *śradhī* (or -i) and *strī* seem to have acquired a fixed position before the beginning of the Vedic period.

§ 210. Table showing the variants of the declensions in -i, -ī, -ī, -ū, -ū.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
179	Nom. acc. neut. s. in -ū.....	8	3	2	5	2	..	..	2
180	Instr. masc. sing. in -īd, -yā.....	3	..	1	1	..	1	2	3
" "	" -īnā.....	20	11	12	23	5	3	17	25
" "	" -ūd, -vā.....	46	13	14	27	5	..	8	13
" "	" -ūnā.....	51	17	34	51	7	7	41	55
	Transitions to -īnā, -ūnā.....	6	3	18	21	6	..	14	20
181	Instr. fem. s. (-ī stems) in -ī.....	59	19	27	40	5	..	1	6
" "	" in -ī.....	17	2	3	5	1	..	1	2
	All in -ī, -ī.....	76	21	30	51	6	..	2	8
	Instr. fem. s. (-ī stems) in -īd, -yā.....	23	7	11	18	6	3	41	50
"	" -īmī, etc.....	4	4	3	7	1	..	..	1
"	(-ū stems) in -ūd, -vā.....	8	1	2	8	4	2	4	10
"	adverbs -uyā.....	14	3	9	12	1	5	6	12
182	Dat. fem. sing. in -ī, (ūtī, vītī).....	12	5	5	10	1	..	..	1
"	-suasti.....	8	2	..	2	1	2	?	23
183	Dat. inasc. neut. in -ue, -ve.....	11	2	2	4	..	..	2	2
184	<i>aryāḥ</i> , <i>dvyāḥ</i> (all forms).....	58	7	15	22	7	..	..	7
185	Nom. voc. acc. pl. in -vāh.....	8	5	3	8	..	1	..	1
186	Abl. gen. masc. sing. in -vāh.....	19	7	12	19	1	8	1	5
	Abl. gen. neut. s. in -vāh.....	41	26	32	58	4	..	1	5
	All forms in -yah, -vāh.....	126	45	62	107	12	4	2	18
	Abl. gen. neut. s. in -oh.....	18	13	4	17	1	2	18	16
"	" -unah.....	17	6	6	12	..	..	..	0
187	Loc. s. before consonants in -ā.....	49	15	37	53	4	..	1	5
"	" " -au.....	19	14	20	34	7	5	c15	c27
"	fem. (-ī stems) in -ī ..	1	2	1	3	..	1	4	5
188	Loc. s. m. n. in -avi.....	16	1	..	1	..	..	..	0
"	n. in -o ..	..	0	..	9	..	..	..	0
"	" in -uni ..	2	1	1	2	..	..	1	1
189	N. v. a. dual masc. in -uvā, -vā.....	2	..	1	1	..	..	..	0
190	Nom. acc. neut. pl. in -ī ..	12	4	7	11	1	..	7	8
"	" " -ī ..	4	..	..	0	..	..	..	0
"	" " -īnī ..	5	6	1	7	1	..	4	5
"	" trī ..	5	10	6	16	..	..	..	0
"	" trīnī ..	9	5	9	14	6	1	20	27
	All forms in -ī, -ī ..	21	14	18	27	1	..	7	8
"	" -īnī ..	14	11	10	21	7	1	24	32
Nom. acc. neut. pl. in -u ..	31	6	10	16	1	..	1	2	2
"	" " -ū ..	9	11	6	17	2	..	..	2
	All forms in -u, -ū ..	40	17	16	83	8	..	1	4
Nom. acc. neut. pl. in -ūnī ..	49	25	48	73	4	1	14	19	19

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
193	Instr. fem. pl. <i>ñtf</i> .....	8	1	1	2	--	--	--	0
195	Masc. forms of -i declension ..	18	1	--	1	1	--	1	2
	Masc. case-forms from -i stems (exc. nom. sing.) .....	3	--	--	0	--	--	--	0
197.	Forms from fem. -i stems in -i, -ibhyām, -ih, -īm .....	6	3	3	6	1	3	0	18
198	Fem. forms -yai -yāh, -yām: -i stems .....	30	16	39	55	8	19	127	154
	" -i stems (by transition) .....	3	0	0	18	0	8	115	129
	" -i stems (exc. <i>prthivīt</i> ) .....	12	12	10	81	7	7	84	98
	" <i>prthivīt</i> .....	39	26	54	80	0	5	78	92
	" i stems .....	1	--	1	1	--	--	2	2
199	All forms in -yai -yāh -yām .....	85	63	122	185	30	39	406	475
	Pronominal forms in -syai, etc. -iāt, -iāh: after heavy syll., -i, -i stems .....	24	19	87	56	8	16	167	191
	" light syll., -i -i stems .....	1	3	2	5	3	4	27	34
	" stem <i>prthivīt</i> .....	--	2	1	3	--	--	4	4
	-siāi, -siāh (of pronouns) .....	7	1	1	2	1	--	3	4
	-iām: after heavy syll., -i, -i stems .....	1	2	--	2	--	--	1	1
	" light syll., -i, -i stems .....	6	3	--	3	1	--	22	23
	" stem <i>prthivīt</i> .....	1	--	--	0	--	--	2	2
	-siām (of pronouns) .....	3	1	1	2	--	--	--	0
	-yai, -yāh after heavy syll., -i, -i stems .....	--	--	--	0	--	--	1	1
	" light syll., " -i, -i stems .....	--	0	6	12	4	7	79	90
	" stem <i>prthivīt</i> .....	6	6	15	21	4	2	29	35
	-syai, -syāh of pronouns .....	23	22	38	60	5	4	38	47
	-yām: after heavy syll., -i, -i stems .....	18	17	27	44	7	18	134	154
	" light syll., -i, -i stems .....	--	--	2	2	1	2	30	33
	" stem <i>prthivīt</i> .....	1	1	2	3	--	--	6	0
	-syām (of pronouns) .....	6	2	14	16	3	1	37	41
202	Forms from masc. stems of -i decl. (polysyllables) .....	5	--	10	10	1	3	31	35
203	fem. polys. in i (except gen. dat. sing.) .....	38	17	24	41	5	1	4	10
204	" in i gen. dat. sing. .....	32	16	37	53	22	10	58	90
205	" " nom. sing. in i .....	6	2	4	6	2	--	--	2
	fem. polys. in i: all forms .....	0	--	1	1	--	--	10	10
206	Transitions from -ū to -u forms .....	38	18	42	60	24	10	68	102
208	Polysyllabic fem. adj. in -ū .....	8	6	10	16	3	--	2	5
	" " proper names .....	16	11	12	23	--	1	6	6
	Polysyllabic fem. in -ū all forms .....	--	2	1	8	1	1	1	8
		16	13	13	26	1	2	6	9

## D. Stems in -ar (-r).

§ 211. Neuter forms are rare in RV., and do not at all follow the rules of the grammarians. We have nom. acc. sing. *sthātár*, *sthātárī* 3, *dhartári* 2, *vidhārtári* 2: genitive *sthātárī* 6: locative *dhmātári*: gen. plnr. *sthātám* (Lamman, pp. 422, 423). These forms occur in A and B: several are doubtful.<sup>1</sup>

§ 212. It has been suggested that a trace of a nom. sing. form in -ár can be noticed where hiatus takes place after the ending -á: but Lamman has shown that such hiatus is very rare: indeed it happens to be rarer than after final -á generally. That hiatus happens to occur twice (out of five occ.) before r, and is so recognized by the diaskenasts, is a matter of no importance.<sup>2</sup>

§ 213. The loc. sing. maso. has the ending -ári in two passages in period A: cf. neut. *dhmātári* abovo: but *nánānd(a)ri* occurs in a late hymn, x. 85.46.

§ 214. The gen. loc. dual in RV. is in -aroh, though the text gives -roh. Yet the single exception occurs in an early hymn (vii. 3. 9).

§ 215. The gen. pl. *svásrám* occurs once, in an early hymn (i. 65. 7). It is a genuine form.

§ 216. The dative and genitive singular of nár 'man' are early. The occurrences are *náre* 5 (and *śárnare*); *nárah* (gen.) 3. Even more distinctly is the gen. pl. *nárdm* or *náráum* early. The alternative form is no doubt everywhere to be read *nñndm*: in one passage only either in RV. or AV. does *nñndm* seem to be favoured, viz. RV. x. 148. 4 (an early hymn): and even here the scansion *nñndm* is perfectly admissible. The form is rare after period B.<sup>3</sup> For the form *nñ'n* see above § 159. The reading *nárah* for nom. voc. pl. is suggested by the position in three hymns of period B (Lamman, p. 428): but the instances in which *nárah* may be read are over 150, and the variant is perhaps only metrical.<sup>4</sup>

§ 217. From the stem *usár* we have voc. *usár*, gen. *usráh* 2, loc. *usári* v. 53. 14 (or *usári*, as Lamman, unless we read *vṛṣtui* at the beginning of the *páda*), acc. pl. *usráh* 2. We have also the locativo singular *us(a)rám* x. 6. 5, pointing (as does *usráh* gen. sing. also) to a formation analogous to that of -i stems. In several passages the interpretation is open to doubt: but we may with some confidence reckon *usráh* (gen. s.) v. 49. 3, *usrdh* (gen. s.) i. 3. 8; 71. 2. These forms occur mostly in A and B.<sup>5</sup>

§ 218. Forms from the stem *stár* (*stř*) are also early; they occur chiefly in the period B.<sup>6</sup>

<sup>1</sup> See Table, § 223.

<sup>2</sup> See above, § 143.

<sup>3</sup> Still less does the fact that the diaskenasts have not recognized the hiatus in i. 127. 10, where it nevertheless exists, confirm Kuhn's hypothesis of the late date of this and the other hymns of Parucchépa. On the contrary, the hiatus confirms the early date to which all evidence assigns these hymns.

## E. Stems in -ai, o, au.

§ 219. From *rāi* we have the Vedic forms *rām* x. 111. 7, *rāy(i)d* i. 129. 9, 10; and in the gen. pl. ix. 168. 13 we may read either *rāyām*, or *rāy(i)dm*. For some isolated compound forms see Lanman, p. 481. Cf. also § 86, note 2.

§ 220. From *gō*, acc. *gām*, gen. *gōh* are sometimes disyllabic, see §§ 66, 71: such forms occur almost entirely in period A. Of the two forms of the gen. pl., *gīvām*, presumably the older, is the one that has survived: *gōnām* (*gōnaam*) occurs 20 times, chiefly in period B.<sup>1</sup>

§ 221. From *div* 'heaven' we have disyllabic forms *dyāuh* (nom. and voc.) *dyām* (acc.), and once *dyāin* acc. pl. With regard to *dyāih*, as it almost always has this value at the beginning of a verse, and not where a double consonant is required to make the preceding syllable long by position, we may interpret the value as *diauh*. On the other hand *dyām* (acc.) frequently makes length by position: we must therefore read *dyām* or *dyāvam*: cf. *gām* above, and § 66. The same reason should lead us to resolve the vowel *ū* in *dyāin*: but there is only one occurrence.<sup>2</sup>

§ 222. Besides these resolved forms the following are more or less regular in RV., but rare in AV.: *dyāh* (ahl. and gen.) 6, *dyān* (aco. pl.) 24, *dyābhīh* 19, *dyāvi* 18, *dyāvā* 22, *dyāvah* 22. Of these the first three (from the stem *dyu-*) are most common in period B: the rest (from stems *dyav-*, *dyāv-*) are most common in A, but still frequent in B. Although *dyām* occurs at all periods, the form *divām* is used side by side with it: but very rarely till the period C: *divām* (so accented) occurs in one hymn (viii. 34) several times.

Closely connected with this declension<sup>1</sup> are the adverbial forms *divā* (in all periods), and *divē-dive* (in A and B). The abl. sing. *dyāuh* occurs once only (i. 71. 8), as does also a voc. dual *dyāvī* (iv. 58. 5).

Of the five possible occurrences of *divah* *divāh* as nom. acc. pl. in RV., three are in B: these forms reappear in AV.

Several forms compounded with *pra* occur, viz. *pradivā*, *pradivah*, *pradivī*, and (in AV.) *pradyāuh*. The occurrences are mostly in B.<sup>1</sup>

§ 223. Table shewing variants of the declensions in -ur (*r*), -ai, -o, -au. (See next page.)

<sup>1</sup> See Table, § 228.

<sup>2</sup> If not rather to be considered as a part of it.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
211	Neuters in -gr.....	9	8	4	7	..	..	..	0
216	From <i>ndr</i> 'man?' sing. <i>ndre</i> , <i>ndrah</i> .....	5	3	1	4	..	..	..	0
"	" gen. pl. <i>nartm</i> , <i>nar-</i> <i>dan</i> .....	11	4	1	5	..	..	..	0
"	" " <i>n̄yām</i> , <i>n̄yādam</i> .....	12	5	9	14	..	..	2	2
217	From stem <i>ngdr</i> .....	4	4	3	6	..	..	..	0
218	" <i>stdr</i> .....	1	6	2	8	..	..	..	0
220	Form <i>gōmām</i> ( <i>gōnaam</i> ).....	6	8	5	13	1	..	1	2
222	" <i>dybh</i> (abl. gen.).....	2	..	3	3	1	..	..	0
"	" <i>dyān</i> .....	4	4	14	18	1	1	..	2
"	" <i>dyūbhīh</i> .....	9	7	9	16	1	..	..	1
"	" <i>dyēpti</i> .....	12	1	2	3	1	..	..	1
"	" <i>dyāvā</i> (not including <i>dyāvā-prthivi</i> ).....	12	2	6	8	2	..	..	2
"	" <i>dyāval</i> .....	11	3	0	9	2	..	..	2
"	" <i>divam</i> .....	8	2	5	7	3	3	59	65
"	" <i>dyām</i> (see also <i>diām</i> § 66).....	13	13	31	44	8	1	31	40
"	" <i>divā</i> .....	12	5	8	8	2	3	13	18
"	" <i>divē-divē</i> .....	20	8	15	23	1	1	1	3
"	" <i>divah</i> , <i>dixah</i> , nom. acc. pl. ....	1	1	8	4	..	..	6	6
"	" <i>pradyauh</i> , <i>pradivā</i> , <i>pra-</i> <i>divah</i> , <i>pradivi</i> .....	7	12	9	21	1	..	2	3

## F. Consonantal Stems.

§ 224. The consonantal root-stems do not lend themselves to so detailed an historical consideration as we are now engaged in, on account of the small number of variant forms: we need only to note a few points. The tendency they shew to pass to a vowel declension is discussed below § 290.

§ 225. The stem *yuj* shews a nasalized strong form in two late hymns i. 162. 21; x. 102. 9: so too *kid̄g* and *sad̄g* in a few scattered forms i. 94. 7; viii. 11. 8; 43. 21; x. 108. 3: *uruvyāc* v. 1. 12.

§ 226. Connected with *pathi* 'path' the RV. has throughout, and quite frequently in late hymns, the strong forms *pánthāh*, *pánthām*, *pánthāh*: the *ā* is resolved in four occurrences, all in A. Not till the AV. do we find occasionally *pánthānah*, and once each *pánthā* and *pánthānam*.

§ 227. The compounds ending in *pad* waver between the strong and the weak stems in the n. v. a. sing. neut. (Lanman, p. 470). The weak form alone occurs in A, both occur in B, the strong form (with a single exception) is found in C. But the number of instances is very small.<sup>1</sup>

§ 228. The form *apah*, acc. pl., shewing the strong stem, is occasional in RV., frequent in AV. The forms of the singular *apā* 1, *apāh* 5 are found in A and B.<sup>1</sup>

<sup>1</sup> See Table, § 285.

<sup>2</sup> In iv. 2. 8 (Lanman, p. 441).

§ 229. From the stem *súar* oblique cases occur in A. B only, with a single exception.<sup>1</sup>

§ 230. From *púns* 'man' the voc. *pumah* is once found, ix. 9. 7: see below § 265.

§ 231. A few forms from the stem *āgás* 'hope' occur throughout RV. and AV.<sup>1</sup>

§ 232. Although in the consonantal declension generally there are but few signs of the distinction between strong and weak forms of the stem, in stems ending in *-h* there is much variation. There are forms of both kinds from *-sah* in strong cases: strong forms only from *-vah*: weak forms only in other adjectives.

In period A strong and weak forms from the stem *-sah* are equally common: afterwards strong forms only appear. There is no reason to suppose that the metre has appreciably influenced the quantity. In viii. 81. 7 it is desirable to restore *satrásdham* (text *satrásdham*).<sup>1</sup>

§ 233. Compounds ending in the roots *-vac*, *-sac*, *-sap* occur in RV. and AV. only in strong cases, and with lengthened vowel: and even of the forms assigned to *-vac* only a few shew weak cases. *nábhah* n. pl. occurs once, *nábhah* acc. pl. with a different meaning: *āgás* has the short vowel, *ukthágás* the long vowel in all forms that occur. In none of these points is there a trace of any movement within the Vedic period.

§ 234. From *dúr* 'door' we have acc. pl. *dúrah* 24 times, *dúrdh* 1, as if from a weak stem *dúr*: the occurrences are chiefly in B. A nom. pl. *dúrah* occurs i. 188. 5, in a late hymn.<sup>1</sup>

§ 235. Table shewing variants of consonantal declension.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
227	Stem <i>pad</i> (compounds): n. a. sing. neut. in <i>-pad</i> .....	2	--	2	2	--	1	..	1
227	Stem <i>pad</i> (compounds): n. a. sing. neut. in <i>-pād</i> .....	--	..	2	2	--	1	10	11
228	Acc. pl. <i>apāh</i> .....	1	1	1	2	1	1	16	18
"	Forms of singular: <i>apā</i> , <i>apdh</i> .....	8	1	2	3	--	--	--	0
229	Oblique cases of <i>súar</i> .....	12	3	9	12	1	--	--	1
231	Forms from stem <i>āgás</i> 'hope' .....	4	2	3	5	--	1	1	2
232	<i>-sah</i> in strong cases .....	18	--	1	1	--	--	--	0
"	" .....	18	11	9	20	--	1	9	10
234	Accusative pl. <i>dúrah</i> , <i>dúrdh</i> .....	8	6	10	16	1	--	--	1

#### G. Derivative stems in -as, -is, -us.

§ 230. From *usás* we have in RV. and AV. the seemingly 'strong' forms *usásam* 11, *usásā* (including *usásandktā*, *náktosásā*) 18, AV. 2, *usásah* (nom. pl. 15, gen. s. x. 39. 1). As this word admits many variants, the genuineness of these need not be disputed. As to the acc. sing. and nom. pl. (and still more of

<sup>1</sup> See Table, § 235.

course as to the gen. sing.) the forms with -as stem are very much more common in all parts of RV. and AV.: and we have therefore every reason to suppose those with -ās to be only temporary variations: they occur chiefly in period B.

On the other hand *usásā* is much the commoner form of the dual: including the compounds we have 20 exx., but only four of *usásā*, none in A. It is not possible that this result is due to the metre: clearly any such argument would equally apply to the metrically equivalent forms of the aco. sing. and nom. pl. The evidence therefore shews that *usásā* dual is the earliest form known to the Vedic poets: and if so, the occasional occurrence of *usásam*, *usásuh* under the double influence of the nom. sing. and the n. v. a. dual is not surprising.<sup>1</sup>

So too occurs once *togásā* (viii. 38. 2), in A.

§ 237. The strong stem appears in nom. sing. *janáh* vii. 58. 2, an A passage.

§ 238. An irregular nom. sing. in -ān appears in *su-ávān* 9, *srátavān* 2 in A and B.<sup>1</sup>

§ 239. Certain words, shewing generally -as forms in RV., nevertheless give acc. sing. -ām, nom. masc. pl., nom. acc. fem. pl., -āh, as if from stems in -ā. These forms are discussed by Lanman, pp. 549-553: the theory of "contract forms" which is put forward is opposed by all we know of the tendencies of the language in the Vedic period, and gets but poor support from the comparison of the Greek. The facts, which are difficult to define, rather point to an original combination of an -ā and -as declension: and if so, we must keep apart those words in which a full -ā declension is maintained, e. g. *medhā*, *āçā*. It is not easy to believe that the *āçás* of the RV. became *āçā* of the AV. by a process going on in the Vedio period, in the entire absence of parallel changes.

§ 240. That the acc. sing. *mahám* is more closely connected with a neut. nom. *maháh* than with other forms of this word seems probable enough: there are 23 forms, all in A and B.<sup>1</sup>

§ 241. The form *sajbásuh* nom. pl. clearly belongs here. Coming to be regarded as an adverb (cf. below, § 244), it is twice used with duals in RV.: and the writers of the AV. may have looked upon the form in this light. There are nineteen occurrences in RV., nearly all in A: and three in AV. (Whitney). With it we may classify *ājósuh*, occurring once in A.<sup>1</sup>

§ 242. Of the other forms suggested the following seem well grounded: acc. sing. *vedhán* 2, *sumedhám* 2, *vayám*, *uṣám* 2: nom. pl. *náveduh* 2, *āngirāh*, *arehīh*, *surdhāh*: acc. pl. m. f. *sumedhāh*, *uṣdh*, 14 forms in all, of which 8 are in A.<sup>1</sup>

§ 243. There are no forms in RV. from a stem *uçánah*: see above, § 163.

§ 244. The neut. nom. acc. sing. ends in -āh (sometimes used adverbially) in 14 instances given by Lanman from RV., and 3

<sup>1</sup> See Table, § 248.

§ 229. From the stem *súar* oblique cases occur in A. B only, with a single exception.<sup>1</sup>

§ 230. From *púns* 'man' the voc. *pumah* is once found, ix. 9. 7; see below § 265.

§ 231. A few forms from the stem *ágas* 'hope' occur throughout RV. and AV.

§ 232. Although in the consonantal declension generally there are but few signs of the distinction between strong and weak forms of the stem, in stems ending in -*h* there is much variation. There are forms of both kinds from -*sah* in strong cases: strong forms only from -*vah*: weak forms only in other adjectives.

In period A strong and weak forms from the stem -*sah* are equally common: afterwards strong forms only appear. There is no reason to suppose that the metre has appreciably influenced the quantity. In viii. 81. 7 it is desirable to restore *satrásdham* (text *satrásdham*).<sup>1</sup>

§ 233. Compounds ending in the roots -*vac*, -*sac*, -*sap* occur in RV. and AV. only in strong cases, and with lengthened vowel: and even of the forms assigned to -*vāc* only a few shew weak cases. *nábhah* n. pl. occurs once, *nábhah* acc. pl. with a different meaning: *ágas* has the short vowel, *ukthaágas* the long vowel in all forms that occur. In none of these points is there a trace of any movement within the Vedic period.

§ 234. From *dvár* 'door' we have acc. pl. *dúrah* 24 times, *dúräh* 1, as if from a weak stem *dúr*: the occurrences are chiefly in B. A nom. pl. *dúrah* occurs i. 188. 5, in a late hymn.<sup>1</sup>

§ 235. Table shewing variants of consonantal declension.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
227	Stem <i>pad</i> (compounds): n. a. sing. neut. in - <i>pad</i> .....	2	..	2	2	..	1	..	1
227	Stem <i>pad</i> (compounds): n. a. sing. neut. in - <i>päd</i> .....	..	..	2	2	1	1	10	11
228	Acc. pl. <i>ápah</i> .....	1	1	1	2	1	1	16	18
"	Forms of singular: <i>ápä</i> , <i>apäh</i> .....	3	1	2	3	..	..	..	0
229	Oblique cases of <i>súar</i> .....	12	3	9	12	1	..	..	1
231	Forms from stem <i>ágas</i> 'hope'	4	2	3	5	..	1	1	2
232	- <i>sah</i> in strong cases.....	18	..	1	1	..	..	..	0
"	- <i>säh</i> .....	18	11	9	20	..	1	9	10
234	Accusative pl. <i>dúrah</i> , <i>dúräh</i> .....	8	6	10	16	1	..	..	1

#### G. Derivative stems in -*as*, -*is*, -*us*.

§ 236. From *usás* we have in RV. and AV. the seemingly 'strong' forms *usásam* 11, *usásā* (including *usásánuktā*, *náktosásā*) 18, AV. 2, *usásah* (nom. pl. 15, gen. s. x. 39. 1). As this word admits many variants, the genuineness of these need not be disputed. As to the acc. sing. and nom. pl. (and still more of

<sup>1</sup> See Table, § 235.

course as to the gea. siag.) the forms with -as stem are very much more common in all parts of RV. and AV.: and we have therefore every reason to suppose those with -as to be only temporary variations: they occur chiefly in period B.

On the other hand uṣásā is much the commoner form of the dual: including the compounds we have 20 exx., but only four of uṣásā, none in A. It is not possible that this result is due to the metre: clearly any such argument would equally apply to the metrically equivalent forms of the aco. sing. and nom. pl. The evidence therefore shews that uṣásā dual is the earliest form known to the Vedic poets: and if so, the occasional occurrence of uṣásam, uṣásuh under the double influence of the nom. sing. and the n. v. a. dual is not surprising.<sup>1</sup>

So too occurs once točásā (viii. 38. 2), in A.

§ 237. The strong stem appears in nom. sing. janáḥ vii. 58. 2, in A passage.

§ 238. An irregular nom. sing. in -ān appears in su-ávān ०, svátvān २ in A and B.<sup>1</sup>

§ 239. Certain words, shewing generally -as forms in RV., nevertheless give acc. sing. -ām, nom. māsc. pl., nom. acc. fem. pl., -āh, as if from stems in -ā. These forms are disallowed by Lanman, pp. 549-553: the theory of "contract forms" which is put forward is opposed by all we know of the tendencies of the language in the Vedic period, and gets but poor support from the comparison of the Greek. The facts, which are difficult to define, rather point to an original combination of as -ā and -as declension: and if so, we must keep apart those words in which a full -ā declension is maintained, e. g. medhā, ḥpā. It is not easy to believe that the ḥgás of the RV. became ḥgā of the AV. by a process going on in the Vedic period, in the entire absence of parallel changes.

§ 240. That the acc. sing. mahám is more closely connected with a neut. nom. maháḥ than with other forms of this word seems probable enough: there are 23 forms, all in A and B.<sup>1</sup>

§ 241. The form sajbsáḥ nom. pl. clearly belongs here. Coming to be regarded as an adverb (of. below, § 244), it is twice used with duals in RV.: and the writers of the AV. may have looked upon the form in this light. There are nineteen occurrences in RV., nearly all in A: and three in AV. (Whitney). With it we may classify díjosiḥ, occurring once in A.<sup>1</sup>

§ 242. Of the other forms suggested the following seem well grounded: aco. sing. vedhám २, sumedhám २, vayám, uṣám २: nom. pl. návedah २, āngirāh, uneháh, surddháh: acc. pl. m. f. sumedháh, uṣáh, 14 forms in all, of which 8 are in A.<sup>1</sup>

§ 243. There are aco forms in RV. from a stem uṣánah: see above, § 163.

§ 244. The neut. nom. acc. sing. ends in -āh (sometimes used adverbially) in 14 instances given by Lanman from RV., and 3

<sup>1</sup> See Table, § 248.

from AV. The occurrences are rather more common in the later hymns.<sup>1</sup>

§ 245. The instrum. sing. in *-ah* occurs six times at least (Lamman, p. 562) : the certain instances are in A and B.<sup>1</sup>

§ 246. *Mánu* takes its forms from the two stems *mánu-*, *mánu-* : the abl. gen. sing., n. v. a. pl. *mánuṣah*, are well established in A and B : the derivatives *mánuṣita*, *mánuṣit*, and (once) *vigvámanus* are much more common in A. For the instr. and dative singular *mánuṇā*, *mánuve* are a great deal more common, and apparently earlier : whilst it is remarkable that the nom. and acc. sing. are decidedly rare. The forms from stem *mánu-* linger in C, but the word as a whole gives way to the derivative *manusyd*.<sup>1</sup>

§ 247. Stems in *-as*, *-is*, *-us* are prevailingly neuter : and it is to be noticed that the nasal element is established in the n. v. a. pl. (-āsi, etc.) of this declension much earlier than in either the *-an* or *-a* declension. It is unreasonable to regard this form as shewing a strong stem.

§ 248. Stems in *-as*, *-is*, *-us*.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
298	Stem <i>uṣas</i> : acc. s. <i>uṣasam</i> ....		7	4	11				0
	" du. <i>uṣasā</i> .....	8	1	8	9	1		2	3
	" nom. pl., gen. s. <i>uṣasah</i> .....	4	2	9	11	1			1
	All the above forms....	12	10	21	31	2		2	4
288	Nom. sing. <i>su-dvān</i> , <i>svātavān</i> .....	3	1	7	8				0
240	Acc. sing. <i>mahām</i> .....	9	7	7	14				0
241	Nom. pl. <i>sajōsah</i> , <i>djosah</i> .....	16	1	3	4			3	3
242	Other forms in <i>-dm</i> , <i>-dh</i> .....	8	3	1	4	2			2
244	Nom. acc. n. sing. in <i>-dh</i> .....	4	1	8	9		1	3	4
245	Instrum. sing. in <i>-ah</i> .....	4	2	—	2				0
246	Stem <i>mánu-</i> : abl. gen. sing., n. v. a. pl. <i>mánuṣah</i> .....	24	9	13	22				0
	Stem <i>mánu-</i> : sing. <i>mánuṣā</i> , <i>mánuṣe</i> .....	1	7	2	9				0
	Stem <i>mánu-</i> : compounds.....	23	1	9	10				0
	Stem <i>mánu-</i> : nom. acc. loc. sing.: gen. plural.....	6	3	8	11	4		2	6
	Stem <i>mánu-</i> : gen. sing. <i>mánoḥ</i> , n. pl. <i>mánavah</i> .....	4	—	7	7	1		2	3
	Stem <i>mánu-</i> : singular <i>mánuṇā</i> , <i>mánuve</i> .....	14	9	14	23			2	2
	Stem <i>mánu-</i> : compounds.....	1	1	1	2			1	1

#### H. Stems in *-an*, *-van*, *-man*.

§ 249. Of the locative singular there are two forms, *-an* and *-ani*: the former prevalent in every part of the RV., but the latter nearly twice as common in the AV. The form in *-ani* is decidedly favoured by the metres of period A : and though other-

<sup>1</sup> See Table, § 248.

wise it might be still rarer in that period, yet the figures shew once more that the metres do not largely influence the forms in any part of the RV.<sup>1</sup>

We may reasonably conclude that *-an* is the earlier formation, and *-ani* due to the analogy of other declensions and the general tendency to expansion of flexional forms.

§ 250. The n. a. neut. plural has the three forms, *-a*, *-ā*, *āni*; the first two, so long as they are used, being about equally common.<sup>2</sup> The form in *-āni* has in all periods more occurrences than the other two put together: but in A the forms *-a*, *-ā* are 40 per cent. of the whole, and in B as many as 47 per cent.: then they rapidly disappear. The theory of transition to the *-a* stems does not suit the general facts well. For the Rigveda a mere correct statement would be that the element *-ni* as sign of the neuter plural appears first in the stems in *-as*, etc.: next optionally in the stems in *-an*, *-a* in the order given: and finally establishes itself as the only form in all neutrals plural. On the other hand, as the forms in *-ā -a* are most common in period B, it is quite possible to regard *-āni* as the original form, and *-a*, *-ā* as temporary variations which reach their maximum in period B.<sup>3</sup>

§ 251. Connected with these stems we find certain "abbreviated" forms of the instr. sing. From the noun for 'greatness' we have in A most often *mahind*, in B *mahnā*; in C, C, most often *mahnā*, in AV. *mahimnd*. Other case-forms from the stem *mahnā* are not common. It is therefore not easy to take as our starting point a stem *mahimnā*, instr. *mahimnā*: so far as the RV. shews, *mahnā* *mahnā* are forms of equal authority, and the former has later been adapted to the stem *mahimnā*.<sup>4</sup> A similarly early word is *dānd* (5 times in A); it never adapted itself to the stem in *-man*. Other similar formations are sporadic.<sup>5</sup>

§ 252. "Syncopation" of the stem, or its weakening by the omission of thematic *a*, is a striking feature in classical Sanskrit of all nouns in *-an*, and of those in which *-man* or *-van* is preceded by a vowel. It is there found in all the weak cases, the suffix of which commences with a vowel. In the RV. and AV. the process of syncopation is only partly complete, and it presents a close parallel to the consonantization of thematic *-i* *-u*.

§ 253. The following forms are not affected by syncopation in RV.: the quasi-in infinitives *dāvāne*, *trāmāne*, *dāmāne*, *dhārmane*, *bhārmane*, and *vidmāne*: the locatives singular, in which the form in *-ani* is preserved by the parent or parallel form in *-an* (though the AV. shews several forms in *-ni*): and the n. v. a. dual neuter, a somewhat rare form.<sup>6</sup>

§ 254. All the stems in *-van*, and the great majority of these in *-man* are preceded by a heavy syllable: those in *-an* more often by a light syllable. That the preceding light syllable favoured syncopation is highly probable: but this feature (if not

<sup>1</sup> See Table, § 263. <sup>2</sup> Amongst the forms in *-ā* I include *cīrātā*, *dhātā*.

<sup>3</sup> The explanation given by me has been reached independently and earlier by H. Collitz, B.B. xviii., p. 281 (1892). See also Bloomfield, JAOS., xvi., p. clvi.

primitive) had spread to the whole of the *-an* stems before the earliest hymns of the RV., and exceptions are only sporadic.<sup>1</sup> The *-van* stems have in period A *-van-*, in B *-vn-* almost without exception: but in C even the forms with *-vn-* have almost disappeared. Stems in *-man* do not admit syncopation after a heavy syllable until period C: but after a light syllable syncopation is the rule throughout.

The facts may therefore be summarized as follows: after light syllables syncopation is the rule in all periods; after heavy syllables it has become the rule in period A for the stems in *-an*, in period B for the stems in *-vn-*, in period C for the stems in *-man*.<sup>2</sup>

The lists given by Lanman require amendment in one or two points: in vi. 18. 7 *námanā* is to be read, not *námnā*: in the lists on p. 525 the occurrence of *dámāno-dámānah* in AV. vii. 83. 2 is to be noted. The readings *rójanā* x. 97. 22, *mahinā* x. 6. 7 are open to some doubt.

§ 255. There are 10 instances of a vocative in *-vah*, scattered throughout the Rigveda.<sup>3</sup>

§ 256. In the strong cases *a* is found in RV. in certain stems (Lanman, p. 523), and *ukṣdñam* i. 164. 43, *vīśāṇam* ix. 34. 3, x. 89. 9 are only sporadic exceptions. In 16 passages Lanman proposes to read *a* in place of the *a* of the *samhitā*, where the latter appears as the seventh syllable of an octosyllabic verse. But in seven at least of these passages neighbouring verses shew that the iambic cadence is not positively required: the remaining nine are: *anarvánam* ii. 6. 5; viii. 81. 8; *mañimánam* viii. 46. 3; viii. 54. 4; *rathaydvánā* viii. 38. 2; *gubhrayávánā* viii. 26. 19; *párijmánam* viii. 61. 10; *dhitívánam* iii. 27. 2; *tigmí-mürdhúnah* vi. 46. 11. In three cases (ii. 6. 5; iii. 27. 2; viii. 46. 3) there is some parallel near, with non-iambic cadence: and the same words or others of similar formation are constantly used in the Rigveda, and are placed in such positions that a long penultimate is favoured or at least admissible. It seems that the iambic cadence is not observed with sufficient strictness in the earliest parts of the Rigveda, in which eight out of these nine passages quoted occur, to enable us to accept the proposed alteration with any confidence.

Of forms with short *a*, many have that vowel in the second place. Here the Vedio rhythm permits a short syllable, provided that a long syllable follows. As this is invariably the case with these words, we may be confident that the short vowel is historically correct.

We must conclude that the length of the vowel was in all ordinary cases determined before the Vedic period.

§ 257. For forms from the stem *maghávant*, see below § 266.

§ 258. The middle cases *áhabhīḥ* 9, *áhabhyāḥ* 2, *áhasu* occur in the RV. up to period C.<sup>4</sup>

<sup>1</sup> Yet the syncopated forms after heavy syllables, though alone in the field, are not very common till period C.

<sup>2</sup> See Table, § 263.

<sup>3</sup> Lanman, pp. 524, 525.

§ 250. The stems *ādhan*, *ādhār* are peculiar to the RV., which also uses *ādhah*. In the table forms that may represent either *ādhār* or *ādhah* are omitted: no precise results can be deduced: but the two former stems do not appear later than B.<sup>1</sup>

§ 260. Case-forms other than the weakest, from the stems *akṣin*, *asthān*, *sakthān* are sporadic in RV.

§ 261. For the use of the stem *pānthān* in strong cases see above § 226.

§ 262. The ace. sing. *māñthām* is once found, in a late hymn, i. 28. 4, in RV., and once in AV.: *mathinām* Vāl. 5. 8 (in an early hymn) is a doubtful reading. Scarcely any forms of *r̥bhukṣān* occur after period A: its declension corresponds to a stem *r̥bhukṣād* in the strong cases, *r̥bhukṣān* in the weak.<sup>1</sup>

§ 203. Stems in -*man*, -*van*, -*an*.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV.	C
240	Loc. sing. in - <i>an</i> .....	73	37	61	98	17	8	28	53
	" " - <i>ani</i> .....	50	21	43	64	3	5	47	55
250	Nom. acc. pl. in - <i>a</i> .....	25	11	16	27	--	8	8	8
	" " " - <i>a</i> .....	28	12	10	31	2	1	--	3
251	Nom. acc. pl. in - <i>a</i> , - <i>ā</i> .....	53	23	35	58	2	1	8	11
	" " " - <i>āni</i> .....	72	26	41	67	8	15	36	57
253	Instr. sing. <i>mahindā</i> .....	20	3	0	12	4	2	--	6
	" " <i>mahimndā</i> .....	--	--	2	2	1	--	5	6
	" " <i>mahnā</i> , <i>mah(a)ndā</i> .....	12	4	16	20	2	--	2	4
	" " <i>dānā</i> .....	5	--	--	0	--	--	--	0
	" " <i>prathindā</i> , <i>prendā</i> , <i>bhūnā</i> .....	1	--	1	1	3	--	--	3
253	Form <i>dāvāne</i> .....	21	8	4	7	--	--	--	0
	Infinitives in - <i>mane</i> .....	1	--	1	1	2	2	--	4
254	Unsyncopated forms after heavy syllables: - <i>man</i> .....	18	7	12	19	--	1	7	8
	" " - <i>van</i> .....	13	--	1	1	--	--	--	0
	" " - <i>an</i> .....	0	--	--	0	1	1	--	2
	Unsyncopated forms after light syllables: - <i>man</i> .....	0	2	1	3	--	--	--	0
	" " - <i>an</i> .....	3	1	--	1	--	--	--	0
254	All unsyncopated forms .....	34	10	14	24	1	2	7	10
	Syncopated forms after heavy syllables: - <i>man</i> .....	1	--	--	0	--	2	19	21
	" " - <i>van</i> .....	4	2	9	11	1	8	1	5
	" " - <i>an</i> .....	15	2	15	17	11	4	49	64
	Syncopated forms after light syllables: - <i>man</i> .....	5	1	6	7	1	2	15	18
255	All syncopated forms .....	25	5	30	35	13	11	84	103
	Vocative in - <i>vah</i> .....	4	8	2	5	1	--	--	1
	Middle cases of <i>āhan</i> .....	5	1	8	4	8	--	--	3
	Forms from stem <i>ādhan</i> .....	7	6	6	12	--	--	--	0
259	" " " <i>ādhār</i> .....	8	6	3	9	--	--	--	0
	" " " <i>ādhās</i> .....	8	1	1	2	--	--	5	5
262	" " " <i>r̥bhukṣād</i> , <i>r̥bhukṣān</i> .....	25	8	4	7	1	--	--	1

<sup>1</sup> See Table, § 203.

## J. Stems in -ant, -at.

§ 264. The RV. has a few forms from the stem *dát* in strong cases, the AV. one : *dán* x. 115. 2 ; *gatádan* AV.; *gúcidan* v. 7. 7; vii. 4. 2 : *grénidan* x. 20. 3, and presumably *dántam* iv. 6. 8, *káraṇyadantam* v. 2. 3. Of these six forms, four occur in period A. On the other hand we have nom. pl. *ubhayatdatabh* x. 90. 10, nom. sing. *dántah* vi. 75. 11, both in very late hymns, and many forms from the stem *dántu* in AV.

In vii. 4. 2, x. 20. 3 the metre causes difficulty. In vii. 4. we have a regular hymn in Triṣṭubh, and the correction *gúcidantah* is clearly an improvement : in x. 20 we have trochaic Gāyatrī, and a verse such as *bhrójate gráyijidantah* has several parallels. We have however no parallel forms in -*danta*, and even the simple stem *dánta* does not appear till C., whereas both these verses are in A.<sup>1</sup>

## K. Possessive stems in -mant, -vant.

§ 265. Vocatives in -*mah*, -*vah* are mostly found in period A :<sup>2</sup> the later form -*man*, -*van* is rare till period C.<sup>1</sup>

§ 266. Middle cases of *maghávan* from this declension are mostly found in period A. The nom. sing. forms *maghúván* iv. 16. 1, *sáháván* i. 175. 2, 3 are early : but *sáháván* is later (ix. 90. 3 ; x. 83. 4).

§ 267. As for the stem *árvant*, the forms *árvá*, *árvánum*, *árvánah*, as if from *árvan* are presumably the older : tho numbers do not perhaps shew this conclusively, but they are consistent with it.<sup>1</sup>

L. Perfect participles in -*vas* (-*váhs*), and comparatives in -*yas* (-*yáhs*).

§ 268. Vocatives in -*vah* 28, -*yah* 2, belong to periods A B : yet amongst the occurrences of *mídhuaḥ* (the only form with resolution) we find three in the period C., viz. ix. 113. 2 ; x. 85. 25, 45. There are no occurrences in AV. The later form -*van* occurs once only, in AV.

§ 269. Forms from the middle stem -*vat* are rare and sporadic : there are five instances only in RV., none in AV.

§ 270. Comparative and superlative forms in -*ustara*, -*ustama* appear to occur only in A and B. I note *vidústara* 8, *ávidústara*, *mídhústama*. Otherwise the appearance of *uṣ-* in place of the strong stem is very rare : *cakrúṣam* x. 137. 1 ; *emuṣám* (?) viii. 66. 10 ; *ábibhyusah* i. 11. 5.

§ 271. Stems in -*ant*, -*at*, -*mant*, -*vant*.

<sup>1</sup> See Table, § 271.

<sup>2</sup> To Lanman's list (pp. 519, 520) add *adrival* 47, as in Addenda.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
264	Transition-stem <i>dinta</i> .....	0	..	..	0	..	1	10	11
265	Vocatives in - <i>mah</i> , - <i>rah</i> .....	105	20	32	52	4	..	..	4
" "	- <i>man</i> , - <i>ran</i> .....	1	1	1	2	5	..	8	13
266	Middle cases from stem <i>magh-</i> <i>dvant</i> .....	17	2	7	9	..	..	..	0
267	<i>dvant</i> : <i>árvā</i> , <i>árvāṇam</i> , <i>ar-</i> <i>vāyah</i> .....	8	5	5	10	4	..	1	5
	<i>árvān</i> , <i>árvantum</i> .....	1	2	2	4	4	..	..	4

Stems in -*vas* (-*vāñ*), -*yas* (-*yāñ*).

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
268	Vocatives in - <i>rah</i> , - <i>yah</i> .....	14	7	6	13	..	3	..	3
269	Forms from middle stem - <i>vat</i> .....	1	..	8	3	1	..	..	1
270	Comparatives, etc. in - <i>usvara</i> , - <i>uṣṭama</i> .....	4	..	6	6	..	..	..	0

#### M. Declension of numerals.

§ 272. The duals *dud*, etc., have been discussed above, § 92: *duau* does not occur before consonants in RV. For the forms *tri*, *trīpi*, see above, § 190: forms from *astū* 'eight' are referred to, but not included, in § 148 above: the form presumably earliest (*astū*) occurs viii. 2. 41: *astaú* twice in the period B, (i. 35. 8; x. 72. 8), somewhat earlier than the -*au* forms from other duals: *astū* (according to Pp.) in x. 27. 15 (O). The AV. has *astāu* and *astū*.

#### N. Declension of pronouns.

§ 273. For the instrum. *tūt* (never *tvā*) see above, § 145; it occurs only in the phraso *tūt yujā*, and (probably) in composition.

§ 274. The RV. has the locative forms *tvé* (and *tué*), *asmé*, *yusmē*: but these hardly appear after C<sub>1</sub>: whereas the forms *máyi*, *tváyi* and *asmátsu* come into regular uso about the same time.

§ 275. The dative form *tibhyu* sometimes appears in the text (13 times): more often (18 times), this form, as well as *máhya* (13), *asmábhya* (17), may be restored on the evidence of metre. From the instances suggested by Grassmann, *máhya* in i. 50. 13 must be withdrawn. These forms occur in A and B.<sup>1</sup>

§ 276. The dual forms *yuvábhýām*, *yuvdbhyām* are both rare and apparently early: *yuvóh* appears in A and B.<sup>1</sup>

§ 277. In connexion with the personal pronouns the extraordinary growth of the use of the first personal pronoun in the singn-

<sup>1</sup> See Table, § 286.

lar is to be noted, although this seems due to a change of idiom rather than of grammatical form, and marks a development of the personal and dramatic elements in the RV. The forms are commoner in B than in A, and in C, C, and AV. are rapidly progressive : so that the AV., which has about the same amount of matter as B., has nearly four times as many occurrences.

The increase is most rapid in the forms *máyā*, *máhyam*, *máit*, and least so in the enclitic forms *mā*, *me*, which we may therefore perhaps consider to be relatively earlier forms.<sup>1</sup>

§ 278. Except with *tuā*, *tuā-* (for which see above, § 145), composition with any case-form of a pronoun is very rare : it is however found as late as the AV.

§ 279. In the deelension of the pronoun *ta*, the later rule requires *sá* nom. sing. masc. before consonants, *só* in combination with initial *a* of the following word, *sá* before other vowels. The parallels in Greek and elsewhere, and the like forms *syá*, *esá*, all point to *sá* as the original form : and it is practically maintained in classical Sanskrit, except before initial *a* : the alleged form *sáh* being little more than a fiction to excuse the exceptional hiatus.

It appears that this form before vowels presented a difficulty to the Vedic writers, and was therefore to a large extent avoided. If we consider the cases that actually occur, the substantial point is whether *sá* is or is not combined with a vowel following.

Combination occurs 31 times in RV. (Grassmann *sá* 28, *só* 3), hiatus 36 times (Gr. *sá* 11, *só* before *a* and double-consonant 23, before *a* and single consonant 2) : that is to say, hiatus, always rare in other words ending in *-a*, is here the more common. But it appears that contraction gains ground in the RV., and in C, is actually the more common, whilst in the AV. again (Oldenberg, p. 462) we have always, or almost always, hiatus.

As the recognition of a form *sáh* must have checked contraction at once, we must infer that no such form was present to the minds of the writers till the period O., or that of the AV., but that hiatus was maintained on other grounds. At that time, the form *sáh* appeared, and quickly replaced *sá* before vowels, and contraction ceased.

Outside a few irregularities which cannot have a value as evidence, we find *sáh* in RV. only before initial *a* as *só*, where the written form is contradicted by the metre, and at the end of even *pādas*. The latter group of occurrences shews that the revisers of the Sanhita text recognized *sáh* as the fundamental form, in the same way as the later grammarians.<sup>1</sup>

§ 280. Of the forms *sásmi*, *tásmin*, the former perishes early.<sup>2</sup>

§ 281. The nom. sing. *esá* is early, *esáh* late : in the middle period B, both forms are rare : other forms of this pronoun (except perhaps the duals) are all more common late, see below, § 483. It therefore appears that the whole word has developed

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<sup>1</sup> See Table, § 286.

from the nom. sing. mase. As to *ena* see below, § 433 : the dual form *enoh* occurs four times in RV., once as late<sup>1</sup> as C.

§ 282. The pronoun *adis* is much more common late<sup>2</sup>: *amū* occurs once as neut. pl. in AV.<sup>3</sup>

§ 283. The neuter *kād* is early, *kim* late: *nakih* is early, *mākīh* rare except in the period B.<sup>4</sup>

§ 284. The neut. pl. *imānī* is much later than the corresponding forms from -a stems: it is practically unknown till the period B., and even in AV. is the less common form. The instrumental *ayā* is early, as also is *end*, except when an adverb.<sup>5</sup>

§ 285. The adjectival declension of *nīgru* occurs four times, in A and B.

§ 286. Table of pronouns (flexional forms).

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
274	Locative (or dative) <i>tue</i> , <i>trē</i> . . . . .	37	13	17	30	2	-	-	2
"	" <i>asmic</i> . . . . .	88	32	60	92	14	3	1	18
"	" <i>yusmē</i> . . . . .	4	1	1	2	-	-	-	0
	All in -é . . . . .	129	46	78	124	15	3	1	20
	Locative <i>māyi</i> . . . . .	2	1	-	1	1	1	45	47
"	<i>tvāyi</i> . . . . .	0	-	-	0	-	-	9	9
"	<i>asmāsu</i> . . . . .	8	4	6	10	5	-	15	21
	All in -i, -su . . . . .	5	5	6	11	7	1	69	77
275	Datives <i>tubhya</i> , <i>māhya</i> , <i>asmdhyā</i> . . . . .	31	14	15	20	-	1	-	1
276	Dual <i>yuvābhīyām</i> . . . . .	8	-	8	3	-	-	-	0
"	<i>yuvābhīyām</i> . . . . .	5	-	1	1	1	-	-	1
"	<i>yuvōh</i> . . . . .	15	8	17	20	-	-	-	0
277	Other forms of 1st pers. sing. . . . .	42	14	48	62	24	35	175	234
	<i>ahām</i> . . . . .	11	6	9	13	8	8	44	60
	<i>mām</i> . . . . .	-	-	-	0	1	1	8	8
	<i>mādyā</i> . . . . .	2	3	4	7	2	3	41	48
	<i>māhyam</i> . . . . .	1	1	2	3	3	1	15	21
	<i>māit</i> . . . . .	26	6	14	20	0	9	65	83
	<i>māma</i> . . . . .	11	14	46	60	20	11	176	207
	enclitic forms: <i>mā</i> . . . . .	109	82	74	100	46	14	247	307
	All the last 8 forms . . . . .	202	76	197	273	115	84	789	968
279	sā with Sandhi (sā and so', etc.) . . . . .	8	6	11	17	6	-	-	6
"	" " Hiatus (sā and so a, etc.) . . . . .	15	5	13	18	3	-	100+	103+
280	form <i>sīsmīn</i> . . . . .	5	1	2	3	1	-	-	1
	<i>tdsmīn</i> . . . . .	6	8	5	8	5	2	37	44
281	<i>esd</i> . . . . .	47	13	4	17	2	1	-	3
"	<i>esdī</i> . . . . .	4	4	2	6	3	4	44	51
283	<i>kād</i> . . . . .	17	10	0	10	1	-	-	1
"	<i>kim</i> . . . . .	4	8	15	23	13	5	31	31
"	<i>nakih</i> . . . . .	27	10	11	21	2	-	1	3
"	<i>mākīh</i> . . . . .	8	2	7	9	-	1	-	1
284	N. v. a. neut. pl. <i>imā</i> . . . . .	20	9	13	22	8	2	7	17
"	" " <i>imāni</i> . . . . .	1	-	4	4	3	-	4	7
"	<i>ayā</i> . . . . .	17	8	8	6	-	-	-	0
"	<i>end</i> . . . . .	9	5	1	6	2	1	-	8

<sup>1</sup> See § 493.

<sup>2</sup> See Table, § 286.

## CHAPTER III. STEM-FORMATION OF NOUNS. §§ 287-312.

§ 287. The formation of the stems of nouns appears, as we have seen, in a fairly complete state in all parts of the Rigveda : where it is not easily separated from the case-formation, it has already been discussed : but a few general points still remain.

§ 288. Of monosyllabic root-stems about 110 are in use in RV. ; of these a large part (about 85) still remain in use after the time of the Brāhmaṇas, many of these being quite common words. Otherwise this declension decays somewhat rapidly, and of the remaining words (from this list, words marked by Whitney as doubtful, and infinitives, are withdrawn) more than one-half the occurrences are in the period A.

The older words are: *áñh*, *árc*, *íd*, *úd* 2, *kíp* 7, *kṣám* 17 AV. 1, *kṣá* 28 AV. 1, *kṣip* 12, *kṣú* 2 AV. 1, *kṣubh*, *gáh* 2, *gṛbh* 2, *tán* 27, *túc* 3, *túj* 5 AV. 1, *túr* 3, *dáç* 1, *dív* 2, *drú* 7, *nábh*, *níd* 25, *píç*, *púr*, *píks* 23, *píre*, *píti* 32, *psúr*, *bádh* 8, *míh* 7, *múr*, *mús* 2, *mýc*, *mýdh* 27 AV. 6, *rám* 2, *rít*, *ríp* 5, *ríṣ* 11, *vás*, *víj* 2, *víd*, *víp* 16, *çáds*, *çubh* 48 AV. 7, *spádh* 24, *sridh* 18 AV. 1, *srú*, *hrít* 2 AV. 1. The various times at which the more important words go out of use is shewn by the table, § 312.

§ 289. Closely connected with the history of the monosyllabic root-stems, yet somewhat distinct in character, is the disuse of masc. and neut. forms from the stem *máh*. The forms are *mahú* (n.) 4, *mahé* 80 AV. 5, *mahálí* (abl.) 16, (gen.) 101 AV. 3, *mahí* (dn. n.) 2, *mahálí* (u. pl.) 3, (acc. pl.) 20, *mahám* (*mahálm*) 5. The decadent forms are replaced by those from *mahút*. It is noticeable that there is no transition to the stem *mahú-*, which is equally early and to a large extent supplementary.<sup>1</sup>

§ 290. In a few words we have a distinct transition to an *-a* stem. Examples: (a) from stems in *-ac*, *uccá* 1 AV. 6, *tiracá* 2, *nicá* AV. 7, *paracá* 6 AV. 5, *paçcá* 26 AV. 23, *paçcitát* 4, *ápaçcúddalughvan* 1 AV. 1, *pracá* 1 : (b) from various consonantal stems: *bhrájá* 1 AV. 3 and *çúcibhrája*: *atiyájá*, *amuyájá* 1 AV. 1, *jírayájá*, *prayájá* 3 and AV. 1, *catayájá* AV. 1: *adhirájá* 1 AV. 5, *grharájá* AV. 1, *dvirájá* AV. 1, *nakṣatrarájá* AV. 1: *páda* 4 AV. 9, besides *pádaká*, *pádagráhya* 2, and *nipádá*: *patádura* 2, *sudhára*: *ánapasphurá*: *purodáça* AV. 2: *másu* 10 AV. 23: *ndás* AV. 1: *anímisá* 4: *mánsú* 2 and AV. 23. (c) from the root *-han*, we have derivatives in *-hana*, *-ghna*, *-ha* (Lau man, p. 479) perhaps in the order named. (d) *mahá* (see previous section) may be an instance of transition before the Vedic period. (e) for *dánta* see above § 264.<sup>2</sup>

§ 291. In the above cases we have the necessary conditions for a real transition, a decadent formation on the one hand, and a fully established and growing formation by its side. The stems

<sup>1</sup> Whitney, Roots, etc., *passim*.

<sup>2</sup> See Table, § 312.

which end in a suffixed consonant have occasionally parallel forms from -*a* stems: but in these cases the hypothesis of transition is much less certain. Where, however, the -*a* suffix is added to the consonantal suffix the presumption is that the shorter form is earlier.

§ 292. Corresponding to stems in -*van* we find *anarvá* 2 (see Lanman, p. 526), *rkvá*, *śbhva* 2, *takvá*, *víkva* 2, *vibháva*, *śikvá* AV. 1: to stems in -*man*, *durmá*, *dhárma* AV. 3, *priyádháma*, *vigvákarma*, *vírákarma*: to stems in -*un*, *unusthá*, *úha*, *círsú* AV. 5. The occurrences are few and sporadic, but *círsú* is a clear case of transition.

Besides these we have the two pairs *ájma* and *ájmán*, *yáma* and *yámnán*, the last two words each having several compounds. It would seem that *ájma*, *yáma* are the earlier forms.

There are also the lengthened forms *anarvána* 2, *ájna*, *ahna* in *apárdhána* AV. 1, *nyádhna* AV. 1, *párváhná* RV., and *sáhna* AV. 1, *páṣána* and *satvaná* 2: but the forms are too few to enable us to draw any conclusion.

A few parallel forms in -*vas*, *śbhvas* 4, *khiļvas*, *śikvas* 4, are early.<sup>1</sup>

§ 293. From stems in -*in* we have the lengthened stems *vanína*, *paramésthína* (AV. 1).

§ 294. Corresponding to -*as* stems we have -*a* (or -*ā*) forms from a number of words: *śūgira*, *advesá*, *áva*, *krúnda* 1 AV. 2, and in *śúcikranda*, *cará*, *tíru*, *durbka*, *niravá*, *purupégá*, *prthu-jríya*, *vátaśvana*, *vidradhá*, *héda* 2 and AV. 2. The instances are sporadic (Lanman, pp. 553-5).

There is also the pair of stems *gárdha* (with its compounds *pragárdha*, *gárdhaníti*) and *gárdhus* (with *vigvágardhus*): of which the latter is distinctly later.<sup>1</sup>

There are only three lengthened forms noticed, *arnásá*, *ájarasá*, and *paríñusá*: for *avasú* is a distinct word from *ávas*.

§ 295. Corresponding to stems in -*us* we have *náhuṣa* 3 (besides two doubtful exx.), *mánusa* 3 (besides two doubtful exx.), and *vápuṣa*. These occur chiefly<sup>1</sup> in period B.

§ 296. The suffix -*ka* is proper to RV. (i.) in derivatives of words in -*ac*, (ii.) in the word *pávaká*, (iii.) in the possessives *asmáka*, *yusmáku*. Otherwise this is a growing formation; and though RV. has more than 100 such words, and AV. about the same number, hardly a quarter of these are common to the two Vedas. Even *éka* 'one' (whatever the reason may be) becomes much commoner in the later hymns.<sup>1</sup>

§ 297. The suffix -*la*, etc., is also late: see above § 122(e).

§ 298. The suffix -*anta* is hardly found before the AV. For *dánta* see above § 264. A substantive *paánta* is a more than doubtful explanation of the form *paántam*, which occurs only i. 122. 1; 155. 1; and x. 88. 1. Occurrences are found of *jívantá* AV. 2, *tarantá*, *vasantá* 2 and AV. 5, *vásantá* AV. 2, *veçantá* AV. 4, *sámanta* AV. 6, *hemantá* 1 and AV. 4.<sup>1</sup>

<sup>1</sup> See Table, § 312.

§ 299. The suffixes *-tāt*, *-tāti*, are found side by side in RV. Of these *tāt* is the older, as the Greek parallels also indicate: no forms are found later than B<sub>2</sub>: the transition to *tāti* finds a parallel in Latin (e. g. *civitatum*).

Examples: *-tāt*, *uparātāt* 2, *devātāt* 8, *vrkātāt*, *satyātāt*, *sarvātāt* 3: *-tāti*, *aristātāti* 5 AV. 8, *āstutāti*, *grbhītātāti*, *jyesthātāti* 1 AV. 1, *devātāti* 27, *musātāti* 2, *gāntāti* 3 AV. 1, *satyātāti*, *sarmātāti* 15 AV. 1. The AV. has also *ayakṣmātāti*, *dakṣātāti*, each once.<sup>1</sup>

§ 300. The neuter suffix *-imān* does not occur after B<sub>2</sub>, except once in AV. *sāvīman*. Examples in RV.: *dārīman*, *dhārīman* 2, *pārīman*, *bhārīman* 2, *vārīman* 5, *sūrīman*, *sīvīman* 5, *stūrīman*, *hāvīman* 9. The long vowel has its parallel in the lengthening of the final vowel of the first part of a compound.

§ 301. Feminine forms from stems in *-man*, *-van*, *-an* are occasionally found in RV.: but only one such form is found in C, and AV. Feminines in *-varī* are found in all parts of the RV., but are most common in C: whilst those in *-nī*, *-mī* are hardly found before AV. For particulars, see Lanman, pp. 527, 528.<sup>1</sup>

§ 302. The pronominal derivatives *tvāvat* 21, *mīvat* 9, *yuvāvat*, *yuṣmīvat* are found in periods A B: but *tdvat* 6 AV. 18, *etdvat* 12 AV. 2, *ydvat* 8 AV. 40, are later. So *iyant* is early, but *kīyant* late.<sup>1</sup>

§ 303. Stems in *-āna* are found in A and B: Examples: *āpāvāna* 2, *ārdhāvāna*, *cyāvāna* 8, *cyāvātāna*, *pārgāna* 3, *pīthāvāna*, *vāsavāna* 5.<sup>1</sup>

§ 304. Participials in *-atā* are comparatively early: Examples: *dargatā* 37 AV. 3: *dargatācī*: *vīgvādurcata* 10: *pacutā* 3: *pacyata* AV. 4: *bharatā* (except ns pr. n.) 2: *yajatā* 46 AV. 2: *haryatā*, 39.<sup>1</sup>

§ 305. For participials in *-su* . *yu*, see below §§ 421, 427.

§ 306. Stems in *-asī* are found in A and B: Examples: *atasī*, *dharnasī* 11, 1 *dhāsī* 6, 2 *dhāsī* 11, *sānasī* 15.<sup>1</sup>

§ 307. Of secondary derivatives in *-van*, *maghāvan* (as applied to Indra) and *ātharvan* are freely used in late hymns: but *maghāvan* (except of Indra) and *ṛtāvan* are distinctly early. Others are rare and more common early: viz. *amāśīvan*, *urāśīvan* 4, *īndhanvan*, *fīghāvan*, *rñāvān* 2, *dhītāvan* 2, *musīvān*, *grusīvān* 7, *satyāvan* AV. 2, *samādvan* 2, *suhāvan* 5, *sāhovan* AV. 1, *svadhāvan* 5. Feminines in *-varī*, and derivatives, are not included.<sup>1</sup>

§ 308. Feminine abstract nouns in *-tā*. If *sānytā* 15 AV. 6 is to be reckoned here, it is the most common word of the class: *devātā* 'divinity' is used in C. Other words are rare: *agbtā* 1 and AV. 1, *anapadyatā* AV. 1, *aprajāstā* AV. 1, *avratā* 3, *janatā* AV. 1, *nagnatā* 1, *suksetrātā* AV. 1, *svīrātā* AV. 2: and as instrumentals only, *abrahmātā*, *iśitatvātā*, *kavyātā*, *dīnatā*,

<sup>1</sup> See Table, § 312.

*puruṣātā* 2, *purusatvātā* 2, *bandhūtā* 3, *mumātā*, *vasūtā*, *sanātā* 2, *sueanātā*. The instrumentals are commonest in B, and this form is very probably the starting point of the declension.<sup>1</sup>

§ 300. For the suffixes *-tūtī*, *-tāt* see above § 299.

§ 310. Suffixes in *-avāna* (Whitney, Gr. § 1240) occur<sup>1</sup> most in A.

§ 311. With regard to the history of the suffixes in Sanskrit very little has as yet been done, and the sketch just made is therefore very slight. It shews that on this side also the periods C, C<sub>2</sub> of the RV. are in substantial agreement with the AV., and differ from the remainder of the RV. Between the periods A and B it shews but little difference: but in A there is a much greater use of monosyllabic root-stems, whilst the use of the suffix *-ka*, and the transition to *-a* stems is more marked in B. On the whole it seems clear that changes in the suffixes take place more slowly than in the endings, and that so far they are of subordinate importance.

§ 312. Stem-formation of nouns.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
288	Monosyllabic root-stems :								
	<i>kīp</i> .....	7	..	..	0	..	..	..	0
	<i>ksām</i> .....	8	1	4	5	4	..	1	5
	<i>ksā</i> .....	7	8	11	19	..	..	1	1
	<i>ksip</i> .....	5	4	3	7	..	..	..	0
	<i>tān</i> .....	17	7	1	8	..	2	..	2
	<i>tūj</i> .....	5	..	..	0	..	..	1	1
	<i>drū</i> .....	4	1	..	1	2	..	..	2
	<i>nīd</i> .....	16	5	4	9	..	..	..	0
	<i>prīks</i> .....	13	6	4	10	..	..	..	0
	<i>pṛt</i> .....	25	5	2	7	..	..	..	0
	<i>bādh</i> .....	3	2	3	5	..	..	..	0
	<i>mīh</i> .....	2	2	8	5	..	..	..	0
	<i>mīdh</i> .....	11	4	8	13	2	2	6	10
	<i>rip</i> .....	2	1	2	3	..	..	..	0
	<i>ris</i> .....	6	8	2	5	..	..	..	0
	<i>vip</i> .....	12	2	2	4	..	..	..	0
	<i>gūbh</i> .....	23	7	15	22	2	1	7	10
	<i>spīdh</i> .....	12	2	7	9	1	2	..	3
	<i>sridh</i> .....	15	1	2	3	..	..	1	1
	Other words in list .....	21	5	13	18	2	..	2	4
	All words not used after Bräh-								
	<i>manas</i> .....	214	66	86	152	18	7	19	89
289	Form <i>mahē</i> .....	50	18	11	29	1	..	5	6
	" <i>mahāp</i> , abl. gen. s. n. acc. pl.	74	22	41	63	2	1	3	6
	Forms <i>mahā</i> , <i>-hāt</i> (du.), <i>-hām</i> .....	5	2	4	6	..	..	..	0
	" from stem <i>mahā</i> .....	21	5	14	19	2	..	..	2
290	Stems in <i>-cd</i> , from <i>-ac</i> .....	12	3	11	14	7	9	42	58
	Other transitions to <i>-a</i> , as in list (b) .....	5	5	7	12	11	0	72	92
	Forms in <i>-hana</i> .....	2	..	1	1	..	..	..	0
	<i>ghna</i> .....	8	2	1	8	..	1	..	0
	<i>ha</i> .....	2	1	..	1	..	..	4	4

<sup>1</sup> See Table, § 812.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV. C
292	Transition-stems in -ma, -ra, -a	5	2	5	7	3	1	9 13
"	Stem { <i>djma</i> . . . . .	2	3	2	5	1	..	1
"	{ <i>ojman</i> . . . . .	5	1	2	3	1	1	2 4
"	{ <i>yāma</i> and compounds.	19	11	4	15	1	1	1 3
"	{ <i>yāman</i> . . . . .	27	15	21	36	2	..	3 5
"	Stems in -vana, -na . . . . .	3	..	2	2	1	1	3 5
"	Parallel forms in -vās . . . . .	6	2	1	3	..	..	0
294	-a forms from -as stems . . . . .	8	4	3	6	..	..	4 4
	Stems { <i>cārdha</i> . . . . .	15	9	5	14	..	..	0
	{ <i>cārdhas</i> . . . . .	13	8	9	17	3	1	2 6
295	Forms as from stem -usu . . . . .	1	1	5	6	..	..	0
296	Suffix -ka : in derivatives of -ae	30	11	29	40	4	1	7 12
"	{ <i>pāvaki</i> . . . . .	46	13	20	33	..	..	6 6
"	{ <i>asnuāka, yuṣmāka</i> . . . . .	20	5	12	17	..	..	0
"	{ <i>ēka</i> . . . . .	60	27	66	93	35	21	158 214
"	remainder . . . . .	89	47	109	156	87	45	189 271
298	Suffix -anta . . . . .	0	..	1	1	..	3	23 20
299	Suffix -tāt . . . . .	5	5	5	10	..	..	0
	-tāli . . . . .	24	7	18	25	4	3	18 20
300	Neuter suffix -iman . . . . .	11	4	12	16	..	..	0
301	Feminine forms :							
	{ -man . . . . .	4	1	5	6	1	..	1 2
	(a) in { -van . . . . .	3	2	..	2	2	..	2 2
	{ -an . . . . .	3	1	2	3	..	..	0
	{ -mūt . . . . .	0	..	..	0	..	..	0 0
	(b) in { -vari . . . . .	22	0	14	20	6	5	27 38
	{ -nī . . . . .	0	1	2	3	..	4	2 6
302	<i>tēvat</i> , etc. . . . .	19	6	7	13	..	4	2 .. 0
	<i>tāvat</i> , etc. . . . .	9	1	9	10	2	5	58 65
	<i>lyant</i> . . . . .	3	..	..	0	..	..	0
	<i>kīyant</i> . . . . .	..	1	3	4	2	..	6 8
303	Words in -āna . . . . .	9	6	5	11	..	1	.. 1
304	Participials in -atā . . . . .	60	31	41	72	6	..	0 15
306	Stems in -asi . . . . .	24	8	12	26	..	..	0
307	Stem <i>maghāvan</i> (exc. of Indra)	70	14	24	38	2	..	1 3
	<i>rīdāvan</i> . . . . .	37	17	19	30	2	2	1 3
	Other secondary derivatives in -van as stated . . . . .	15	6	7	13	2	1	8 6
308	Feminine abstracts in -tā :							
	{ <i>sūñtā</i> . . . . .	9	2	4	6	..	..	0 6
	{ <i>devdtā</i> . . . . .	0	..	..	0	1	1	31 33
	Instrumentals . . . . .	3	8	9	12	1	..	.. 1
	rest . . . . .	4	..	1	1	..	..	7 7
310	Stems in -vāna . . . . .	15	1	8	0	..	..	.. 0

## CHAPTER IV. VERB-INFLEXION. §§ 313-365.

§ 313. The verbal system in Sanskrit is of great complexity: not only is the number of forms in all its parts greater than in any of the cognate languages, but the system as a whole embraces under the description of "secondary conjugation" groups of forms such as in other languages are usually considered as distinct though allied verb-systems. For our present purpose it seems convenient to make a division somewhat analogous to that between noun-flexion and noun stems: and to treat under the heading of verb-flexion those parts of the system in which the variations are almost purely formal, e. g. terminations of all kinds, the use of the augment and of reduplication, and the infinitives and gerunds: whilst under the heading of verbal stems we treat in the main of the growth and decay of the voice, tense, and mood formations, and of secondary conjugation, matters more closely allied to questions of syntax and style.

§ 314. As in the case of nouns, we find that the terminations of the forms of verbal systems are often undergoing rapid change in the Vedic period, and are therewith valuable indications of date. But our discussion of noun stems has only been fragmentary: whilst the verb-systems shew in their use and disuse of particular stems change upon the largest scale: change which is often too slow to aid us much in the construction of a detailed chronological theory, but which is of great interest in itself and of importance as a criterion of the exactness of general results.

§ 315. A precise and logical distinction between flexion and stem-formation in the case of the verb-system is perhaps not attainable, and is not aimed at in these chapters: for instance the infinitive forms, though derived from many different stems, are all treated of under the heading of flexion: and the gerunds and gerundives are conveniently considered in connection with them.

## Personal Endings.

§ 316. Third person singular. In the present middle we find occasionally the ending -e. This formation is disappearing, but not rapidly, in the Vedic period.<sup>1</sup> The Rigveda shews about 146 forms from 24 stems:<sup>2</sup> viz., *t̄se* 29, *citē*, *vidē* (rt. 3 *vid* 'find') 19, *duhē* 6, *bruve*, *huvē*, *mahē*, *niṣēve* (probably) x. 95. 8, *gāye* 11, *stāve* 6: *gr̄nē* 6, *r̄nve*, *gr̄nvē* 19, *sunvē* 3, *hinvē* 2: *jāṅgahe*, *budbadhē* 3, *bābadhē* 2, *sarsrē* 2, *jōguve*, *yoyuve*, *cārkṛṣe* (prob-

<sup>1</sup> See Table, § 335.

<sup>2</sup> The list of forms so far is taken from Delbrück, § 103; but *jōṣe* i. 120. 1, and *vr̄ñjē* are omitted, as the instances are very doubtful.

bly) x. 22. 1; 74. 1; 105. 4:<sup>1</sup> to which may be added *nitogé* iv. 38. 1, *dadhé* 23.<sup>1</sup> In AV. we have four stems only, *te* 11, *ridé*, *duhé* 14, *dadhé* 3.<sup>2</sup>

§ 317. First person plural. There are two forms of the primary ending, *-masi* and *-mahi*, of which the latter is exclusively used in classical Sanskrit. As the causatives are specially common in this person, and employ almost exclusively the form in *-masi*, these forms are reckoned separately: amongst them are included forms from the stem *vijāya-*. The whole number of forms and especially the forms from causatives are much more common in C than earlier: and in particular they are frequent in prayers against diseases and other charm-hymns. If we consider the relative frequency of those forms which are not from causatives, we find that *-mahi* forms are comparatively rare in A B, but in C almost as common as those in *-masi*. But *-mahi* is more common in A than in B: a result the more remarkable because the metres of B decidedly favour the form *-mahi*. Upon the whole results we are not entitled to conclude that *-masi* is the earlier form: it may very well be a variation of an earlier *-mahi*, reaching its maximum of favour in the period B<sub>1</sub> (16: 2) and then again giving way to its predecessor, though retaining its position in causatives up to the end of the AV. period.<sup>3</sup>

§ 318. Second person plural. Forms in *-thana*, *-tuna* are found in all parts of the active verb, including the aorists: they are particularly common in the period C, and there are many cxx. in i. 161. In the AV. they are much less used.<sup>4</sup>

These forms are closely parallel to that in *-masi*. Although greatly favoured by the metres of A, they are not most common in that period. The inference is that the forms are not primitive, but reach their maximum of favour<sup>5</sup> in the period C<sub>1</sub>.

§ 319. Third person plural. A group of personal endings which contain the element *-r*, but are not found in classical Sanskrit, shew in RV. and AV. steady decay: viz., *-re*, *-ire*, *-rate* in the present: *-rata* in the optative: *-rire* perfect: *-ranta*, *-ran*, *-ram* chiefly in aorists. On the other hand the imperatives *duhrām*, *duhratām* are late: see below, § 327.<sup>6</sup>

The examples are *duhré* 7, *vidré* (rt. 3 *vid*), *cérē* AV.: *invire*, *rnvire*, *pinvire*, *graviré* 7, *sunviré* 4, *hinviré* 8:<sup>7</sup> *duhrata* 2,<sup>8</sup> and once in AV.: *eucyavirata*, *jusérata* 2, *bharerata*, *mānsirata*:<sup>9</sup> *cikitrire* 8, *jagṛbhīrē*, *dadrire*, *bubhūjiré*, *vividrire*, *sasjirire*:<sup>10</sup> *dvavītranta*:<sup>11</sup> in *-ran* 43 and once in AV., as given by Delbrück,<sup>12</sup> except that I reckon *asthiran* as occurring twice in i. 135. 1: in *-ram* 16 as given by Delbrück: in all, 105 exx. in RV. and 3 in AV.<sup>13</sup>

<sup>1</sup> For *dadhé* see Whitney, § 669, and Grassmann *sub voce*.

<sup>2</sup> Delbrück, §§ 49, 53.

<sup>4</sup> Whitney, § 550: cf. § 629.

<sup>5</sup> Ib. § 123.

<sup>6</sup> Ib. § 121.

<sup>7</sup> Ib. § 122.

<sup>8</sup> Ib. § 122.

<sup>9</sup> Ib. § 122.

<sup>10</sup> Ib. § 122.

<sup>11</sup> Ib. § 122.

<sup>12</sup> Ib. § 122.

<sup>13</sup> Ib. § 122.

<sup>3</sup> See Table below, § 335.

<sup>5</sup> Ib. § 118.

<sup>7</sup> Ib. § 118.

<sup>9</sup> Ib. § 118.

<sup>11</sup> Ib. § 118.

<sup>13</sup> Ib. § 118.

§ 820. Subjunctive endings:<sup>1</sup> first person. For the dual and plural active we have the forms -āva, -āma only: of these the former is rare, but most used in the periods B, C.<sup>2</sup> For the dual middle we have a form -vahai, which is also rare and somewhat late. For each of the other persons we find a shorter and a longer form, viz.:

- 1 sing. act. -ā, -āni.
- 1 sing. mid. -e, -ai.
- 1 plur. mid. -mahe, -muhai.

It is true that the first sing. mid. in -e is only found from aorist stems -s, as *stusé* (Whitney, § 894): but the forms seem to be clearly subjunctive. The ending -āni cannot be rightly termed a "primary ending": it seems to stand to -ā in the verb-system in precisely the same relation as in the nom. voc. acc. neut. pl. in the noun-system.

The figures shew that the shorter forms are in all cases earlier in date than the longer: and that the form -vahai may rightly be classed with the later group of forms, although it so happens that no examples of the correlative -vahē occur.<sup>3</sup>

Aorists imperative are seldom used except in the earlier hymns (see below, § 407a) and therefore shew usually the earlier forms: but it does not appear that any of these endings is appropriate to a particular tense.

Examples. A. Shorter forms. 1st sing. in -ā: 13 exx. of 11 forms are given by Delbrück:<sup>4</sup> of these *brávā*, *rīradhā*, *vocā* are aorists. 1st sing. in -e (-se): *arcase*, *rījuse* 5, *ohise*, *kṛṣe* x. 49. 7, *gāyise*, *grīṣe* 12, *punṣe*, *yūjase*, *sasāhiṣe* x. 180. 1, *stusé* 22, *hise*: 47 in all. 1st. plur. in -mahe: present *īlāmahe*, *dādāmahe* (iii. 21. 5, perhaps ind.): aorist *kárāmahe* 8 and AV. 1, *dhāmahe* 3, *yūciśāmahe*, *saniśāmahe*; 15 exx., and one in AV. Of all forms, 75 exx. in RV, one in AV.

B. Longer forms. 1st. sing. in -āni: present *carāni*, *jāhāni* AV. 1, *turāni* AV. 3, *dadhāni*, *nāyāni*, *pacāni*, *pācyāni* AV. 1, *bhājāni*, *rdjāni* 2, *vādāni* AV. 3, *vāhāni*, *sanāvāni* AV. 1, *srjāni*, *hārāni* AV. 2: *janīghānāni*, *rundhayāni*: aorist *kárāni* 2, *gānāni* 2, *gāni*, *brāvāni* 2; *bhuvāni*; *stośāni*; *daviśāni*: in all, 21 exx. in RV., besides 11 in AV. 1st. sing. in -ai: from 11 stems as given by Delbrück,<sup>5</sup> of which there occur more than once *kṛṇāvai* 2, *slāvai* 3, making 14 exx., besides *gāchāi* oneo in AV.: of these, two are from s-aorists. 1st. dual in -vahai from 8 stems as given by Delbrück;<sup>6</sup> each form occurs once only: *bravāvahai*, *vocāvahai* are aorists. AV. has three forms: *janayāvahai*, *sācāvahai* 2. 1st plur. in -muhai from 12 stems as given by Delbrück,<sup>7</sup> of which

<sup>1</sup> Not including those of the "improper conjunctive": see §§ 392, 898.

<sup>2</sup> See Table, § 835. <sup>3</sup> Delbrück, § 5. <sup>4</sup> Delbrück, as 2 sing. perf.

<sup>5</sup> Delbrück, p. 181: but I include also viii. 52. 8 and x. 93. 9.

<sup>6</sup> § 16.

<sup>7</sup> § 21.

<sup>8</sup> § 24.

there occur more than once *náçamahai* 2, *brávamahai* 2, *bhunájāmahai* 2, making 15 occurrences: *gámamahai* and *brávamahai* are aorists: the AV. has 6 forms, *jánāmahai*, *bhájāmahai* 2, *bhunájāmahai*, *střnavāmahai*, *hvayāmahai*. Of all forms there are 58 exx. in RV., 21 in AV.

§ 321. Second and third persons sing. active. We find the pairs of forms -s, -si; -t, -ti: and in the middle -se, -sai; -te, -tai. The "secondary" forms -s, -t, are the more common in RV. and AV.: and in the Bráhmaṇas are almost exclusively used.<sup>1</sup> But up to the time of the AV. the longer "primary" forms are growing in favour. As to the middle voice, -se, -te are always used in RV., -sai, -tai in AV. and Bráhmaṇas. But the form *yujitai* is found i. 84. 18.<sup>2</sup> In both voices therefore the tendency is towards lengthening.

§ 322. Dual. The active endings are -thaḥ, -tah: in the middle the endings -aithe, -aite are found in nine words, each occurring once only, and in the earliest part of the RV.: the instances are given by Delbrück.<sup>3</sup> The regular -āthe (2 du.) occurs in the passive *vhyātē* iv. 56. 6, with middle meaning.

§ 323. Plural. The active endings are -ma, -tha, -an: in the middle, the 2d person is rare: in RV. there is one ex. in -dhve (ii. 14. 8)<sup>4</sup> in B., and there are three in -dhuai (i. 37. 14; i. 101. 8; vii. 59. 6)<sup>5</sup> in B. and C.: and the latter form as -dhvai is again found in the Bráhmaṇas.<sup>6</sup> The third person is also rare: -nte is found a few times in RV.:<sup>7</sup> in the Bráhmaṇas -ntai<sup>8</sup> occurs.

§ 324. Thus throughout the subjunctive mood we have change at work in the endings, and almost everywhere towards lengthening: and this change is further accompanied by change in the thematic vowel.<sup>9</sup> This unsettlement probably tended largely to the disuse at a later time of the subjunctive mood-forms: see below, § 393.

§ 325. 2. 3. sing. imperative in -tāt. This form is increasingly used in the later periods: it is usually of the 2d person. There are 21 exx. in RV.<sup>10</sup>, and I note 18 in AV.: viz. *asyatāt*, *gachatāt* 3, *gr̥hitāt*, *jahitāt*, *jägṛtāt*, *jinvatāt*, *jänūtāt*, *śratāt*, *dhārayutāt*, *dhāvatāt*, *mṛdatāt*, *rakṣatāt*, *vahatāt*, *emaratāt* 2, *srutāt*.<sup>11</sup>

§ 326. 2. sing. imperative in -si. This appears to be most common in the period A B., and is very rare in C or later. Delbrück<sup>12</sup> gives 153 exx. from RV., from which are to be withdrawn *kṣesi* vi. 4. 4, x. 51. 5 (so Grassmann), and to which are to be added *dakṣi* ii. 1. 10, *páṛṣi* i. 174. 9; *mátsi* i. 9. 1, ix. 97. 42

<sup>1</sup> Whitney, §§ 615.

<sup>2</sup> Whitney, §§ 560, 561.

<sup>3</sup> See Table, § 385.

<sup>4</sup> Delbrück, §§ 62, 106.

<sup>5</sup> Ib. § 65.

<sup>6</sup> Whitney, §§ 561.

<sup>7</sup> Delbrück, § 112.

<sup>8</sup> Delbrück, §§ 38, 77.

<sup>8</sup> § 89.

(second occurrence) : *yakṣi* x. 1. 6: making 156 exx.: from AV. I note only *kársi*, *nikṣi* 4, *vrksi*, *satsi*.<sup>1</sup> See Whitney, § 624.

It is characteristic of these forms that the stem to which they are attached is in all cases the simple root, although often neither root-present nor root-aorist is in general use. From this peculiarity it seems reasonable to associate with them the following middle forms, which shew the usual terminations: *trásva* 2: *dhiṣvá* 8, *mátsva* 13, *yúkṣva* (*yuj*) 3, *rásva* 21, *vánsva* 4, *sakṣva* (*sac*), *trádhwam* 2. These forms appear to be still earlier.<sup>2</sup>

§ 327. Imperatives in *-ām* hardly occur before AV.: but *duhām* is found twice in period C, viz. i. 104. 27; iv. 57. 7. AV. has *inddhām* 2, *duhām* 7, *rundhām*, *vidām*, *guyām* 4: and the similar plural forms *duhrām* 6, *duhratām* 5.

§ 328. The impv. *edhi* (as 'be') is late: *daddhí* (whether from *dā* or *dhā*) is early.

§ 329. Verbs of the *-nu*, *-u* class form the 2. sing. impv. as follows: (a) *grnudhí* (-i) occurs 5 times in the earliest part of the RV.; (b) if the root ends in a consonant (except *n*), *-hi* is found: the RV. has one exception, *ūṛṇu* ix. 96. 11; (c) after a vowel or *-n*, *-hi* is omitted with frequency in the AV., and always in classical Sanskrit. But this omission is more frequent in period A than in B.

The exx. are: *-hi* retained: *inuhi*, *kṛnuhi* 28 and AV. 5, *cinuhi*, *tunuhi* 5, *dhīnuhi* 3, *grnuhi* 7 and AV. 1, *sunuhi*, *spṛnuhi*, *hinuhi* 2: 49 in RV., 6 in AV. *-hi* omitted: *inu*, *kuru* 2 and AV. 6, *kṛnu* 8 and AV. 26, *tanu* 1 and 2 in AV., *grnu* 3 and AV. 2, *sunu*, *hinu* 2: 18 in RV., 36 in AV.<sup>1</sup>

§ 330. The imperative in *-āna* in the *-nā*, *-ni* class is late. Exx. *açāna* 2 AV. 1: *grhānā* x. 103. 12, AV. 1: *bādhāna* AV. 1, *stabhānā*, AV. 1. But there are in RV. no corresponding forms of any other type where the root ends in a consonant: AV. has *grbhñāhi*, *grhñāhi*.<sup>2</sup>

§ 331. Perfect stem. The personal endings shew few variations. For the first and third pers. sing. the ending *-ā* is quoted occasionally as a variant of *-ā* (e. g. *bibhāyā* viii. 45. 35) and twice as a variant of *-au* (*paprā* i. 69. 1, *jahā?* viii. 45. 37). These three occurrences are all in period A: the analogy of the dual and locative forms in *-ā*-*au* in noun-declension makes it probable that *-ā* was the original ending from stems derived from roots in *-ā*.

§ 332. Various personal endings normally in *-ā* shew frequent lengthening to *-ā̄*.<sup>3</sup> As this phenomenon is probably not altogether independent of metrical position its discussion is not here attempted.

§ 333. Variations of a formal character affecting the thematic or root-vowel may conveniently be referred to here. Of these

<sup>1</sup> See Table, § 335.

<sup>2</sup> Corresponding to *māsva*, we find both *māsi* and *māhi*.

<sup>3</sup> Whitney, § 723.

<sup>4</sup> Whitney, § 248c: Benfey, *Abh. Gött. Ges.* xix.-xxi. (1874-6).

the most important is the use of a strong form of the stem in the 2d pers. dual and plural of the present and root-aorist stems, in the indicative and imperative moods. It is less often found after the period C.

Examples: present 2 dual *yuyotam* 2, *hinotam*; 2 pl. *iyartu* 1 AV. 1, *éta* AV. 1, *étana* 3, *unúttā*, *krnóta* 5, *krnótum* 5, *juhbta* 12, *juhbtau* 6, *dádáta*, *dádátau*, *tánota* 1 in AV., *dádháta* 14 AV. 3, *dádhátau* 11, *piptana* (1 par) 2, *piptana* (2 par) 4, *puntáta*, *bravítana* 2, *gvanákta* 2, *gnyóta* 0, *gnyótum* 3, *gnota* 1 AV. 2, *gyroluna* 2, *sunbta* 5 AV. 1, *sunbtum* 3, *stota* 2, *himbta* 9, *hinotum*: all du. and pl., RV. 109, AV. 9. Imperfect 2 pl. *akñota*, *akñotana* 3, *íjahátau*, *íladáta*, *íladháta*: total 7. Root-norist 2 du. : *kártam* AV. 2, *guntam* 13, *varktam* 2, *varlam*: 2 pl. *kártta* 0, *kártana* 6, *gánta* 0, *gántana* 10, *nurtu*, *gróta* 4, *sbtá* 3, *ectana*, *héta*: *áhetana*: in all, 61 in RV., 2 in AV.

A few forms are found in the singular: *gagádhí* 2, *gigádhí* 4, and from rt. 2 *yu*, *yuyodhí* 7: in all, 13.

§ 334. In the middle forms of rt. *dhá* the RV. occasionally retains the thematic vowel: viz. *dadhidhvé* 4, *dadhisvú* 7 and AV. 1, *dadhidhvam* 3. The occurrences are chiefly in period A, and are classified by Whitney, Roots, oto, as perfects.

§ 335. Table showing the use of the personal endings, etc.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
316	3d. pers. sing. pres. mid. in -e..	74	22	37	59	7	6	29	43
317	1st. pers. plural, primary tenses:								
	(a) from non-causatives: in -masi	45	15	19	34	7	5	85	97
	-mah	15	1	5	0	5	4	71	80
	(b) from causatives: in -masi..	17	1	1	2	--	11	39	50
	-mah...	1	1	1	2	--	--	4	4
318	2d pers. pl. in -thana, -tana..	62	27	44	71	20	9	13	42
319	3d pers. pl.: forms containing -r, except <i>duhrám</i> , <i>duhratám</i>	56	24	16	40	7	2	4	18
320	3d pers. pl.: <i>duhrám</i> , <i>duhratám</i>	0	--	--	0	--	--	11	11
	1st pers. subjunctive (imperative):								
	(a) shorter forms: -a... ..	4	2	4	6	3	--	--	3
	-e (-se) ..	20	9	9	18	--	--	--	0
	-mahe ..	6	3	5	8	--	1	1	2
	All shorter forms .....	39	14	18	32	8	1	1	5
	(b) longer forms: -dní.....	3	1	3	4	12	2	11	25
	-ai.....	2	--	3	3	7	2	1	10
	-vahat .....	3	--	1	1	3	1	3	7
	-mahat .....	6	--	2	2	4	3	6	18
	All longer forms .....	14	1	9	10	26	8	21	55

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
821	2. 3. sing. subj. in -s, -t, ....	236	85	131	216	49	21	131	201
	" " -si, -ti	82	26	50	76	27	15	76	118
	2. 3. sing. subj. mid. in -se, -te,	43	10	27	37	13	8		16
	" " -sai, -tai	0	..	1	1	..	..	15	15
822	2. 3. dual subj. mid. in -aithe, -aite	9	..	..	0	..	..	..	0
825	2. 3. sing. impv. in -tat	4	1	10	11	..	6	18	24
826	3 sing. impv. in -si	73	32	50	82	1	..	7	8
	Corresponding forms in -sua, -dhwam	36	9	8	17	1	..	..	1
827	3 sing. impv. in -va: pl. -ram, -ratam	0	..	..	0	2	..	26	28
828	Form edhi	5	1	3	4	1	5	16	22
	" daddhi	6	1	1	2	..	..	..	0
829	" grṇudhī (-f)	5	..	..	6	..	..	..	0
	Ending -hi retained in certain verbs	21	7	19	26	1	1	6	8
	Ending -hi omitted in certain verbs	9	..	5	5	..	4	36	40
833	Strong stems in 2 du. pl. present	43	20	30	50	15	1	9	25
	" " imperfect	1	1	2	3	3	..	..	3
	" " root-aorist	41	11	8	17	2	1	2	5
	" " 2 sing. pres. impv.	0	2	3	5	1	1	..	2
	All forms	91	34	41	75	21	8	11	35
834	Forms dadhidhvē, dadhīṣvā and dadhidhvam	9	2	2	4	1	..	1	2

## Augment, Reduplication, etc.

§ 336. The frequent occurrence in the RV. of the forms of the past tenses of the indicative mood without the augment is a well-known feature of the hymns: but it is not always easy to distinguish these occurrences from the identical forms of the "improper subjunctive."<sup>1</sup> For our present purpose the distinction has little practical importance, and it will be sufficient to accept the lists as drawn up by Professor J. Avery in a previous number of this Journal.<sup>2</sup>

§ 337. It is necessary at once to distinguish between the 'absolute' frequency of the unaugmented forms, and their 'relative' frequency as compared with the corresponding augmented forms. In the whole of period C the unaugmented forms do not number one hundred, whilst the augmented forms exceed 1800. The unaugmented forms are therefore both absolutely and relatively rare. In the periods A and B the unaugmented forms number 426 and 561 respectively, that is to say, they are quite common, and there are absolutely more occurrences in B than in

<sup>1</sup> Whitney, §§ 563, 587.

<sup>2</sup> Vol. xi., pp. 326-301.

A.<sup>1</sup> But the augmented forms in periods A and B number 928 and 1703 respectively. Therefore in A the unaugmented forms are somewhat less than one-third, in B somewhat less than one-fourth of the whole: so that relatively to the whole number of historic forms they are of diminishing importance.<sup>2</sup>

§ 338. If we consider the different tense-stems we find that the pluperfect forms are always very few in number, and no unaugmented forms are found after the period B,<sup>3</sup> As to the present stems, the relative frequency of the unaugmented forms diminishes regularly: a result of which the importance is to some extent, but not largely, qualified by our previous use of these occurrences as a determining factor in the assignment of hymns to the period B rather than A, and *vice versa*. In other words, the augmented forms of the present tense grow greatly in importance in the periods B, B,<sub>2</sub>, and after that time become stationary: whilst the unaugmented past forms grow but slightly in importance in B, and afterwards rapidly become fewer.<sup>4</sup>

§ 339. Turning to the aorist-stems, we do not find the same regularity. The use of the augmented forms is as nearly as possible stationary throughout the whole period; that is to say, the number of forms is almost exactly proportional to the amount of matter in each period. If, however, we take into account that the periods B, and B,<sub>2</sub> contain a much greater proportion of historical matter, and in consequence about one and a half times as many historical forms of all kinds, we find that the augmented aorist is relatively in disfavour in period B, but loses ground no further in period C.<sup>5</sup>

§ 340. As to the unaugmented aorist-forms, if we take the whole period B, the number of forms is, relatively to the amount of matter, the same as in A: so that these forms are in exactly the same disfavour as the augmented aorist-forms: but on the other hand in period C they disappear rapidly, though not quite regularly. But if we compare the periods A and B, only, the result is different: for the number of unaugmented forms in B, shews a distinct increase as compared either with the augmented forms or the amount of matter.<sup>6</sup> In A the unaugmented forms are 24 per cent. of all the aorist-forms, in B, 29 per cent. The importance of this result is somewhat increased by our previous use of the unaugmented aorist-forms, amongst others, as a deter-

<sup>1</sup> The amount of matter in B is greater than that in A by about one-fifth.

<sup>2</sup> See Table, § 353.

<sup>3</sup> See the list in § 410.

<sup>4</sup> KZ. xxxiv. pp. 309, 330. On account of the comparatively large number of forms in this category, some allowance must be made for this difficulty: but it will be seen by reference to KZ. p. 315 that all the flexional forms together have had comparatively small effect on the detailed classification.

<sup>5</sup> B, contains about one half as much matter as A.

mining factor in the assignment of hymns to the period A rather than B :<sup>1</sup> see KZ. xxxiv. p. 309.

§ 341. The conclusions to be drawn from the statistics on these points are not easily determined : but it would, I believe, be a mistake to attribute the results to chance, or to consider them as destructive to the general argument by which the literary epochs of the RV. have been provisionally defined. The number of occurrences is sufficiently large to lead us to look for a cause for the change of proportions: and whilst we cannot but believe that those hymns which differ most widely from the AV. in their whole structure are most widely separated from it in date, it would be contrary to reason to expect that the same amount of divergence should be shewn in every particular.

§ 342. In the primitive Indo-European or "Teutaryan" language the augment was, according to Delbrück's opinion<sup>2</sup>, a necessary part of every historic tense-form. Forms without augment constitute therefore a phenomenon of which we can trace the disappearance in Sanskrit and in Greek, but of the beginnings of which we have no literary record. As regards the forms of the present stem, the usage is already in decay in the earliest periods of the RV., but as regards aorist-forms we can trace no sign of this decay until the period B.<sup>3</sup>. The evidence available to us rather goes to shew that the usage was still progressive in the period B.<sup>4</sup>. The stationary position of the augmented aorist-forms during the whole Vedio period is a curious result of the play of several opposing forces; and as will appear below,<sup>5</sup> is not inconsistent with the fact that the aorist-system as a whole is already in its decay.

§ 343. Augment *a-*. This is not infrequent in RV., occurring mostly in the period B. Whitney<sup>6</sup> quotes nine verbs, and I follow him, including *ānat*<sup>7</sup> and excluding *ācita*.<sup>8</sup> The exx. are *ānat* 28, *āyunak*, *āyukta*, *āraik* 4, *ārinak*, *āvar* 16 and AV. 1, *āvidhyat* 2, *āvrik* 4, *āvṛni*; in all, in RV. 58, AV. 1.<sup>9</sup>

§ 344. Reduplication. An irregular reduplication is found in RV. in the presents *didi-*, *didhi-*, *pipi-*. Of these *didhi* is more common in the later hymns, and is also found in the Brähmaṇas: the other stems are early.

§ 345. In the perfect a long vowel in the reduplicated syllable is not rare in RV., and continues to occur in AV. and Brähmaṇas, though more rarely. From roots *kīp* and *gar* 'wake' it is found even in classical Sanskrit: with these we are not further concerned here.

It is not easy to distinguish these forms from intensives: I follow Whitney's later classification.<sup>10</sup> From the list given in his grammar<sup>11</sup> *tan* must be deleted: to it must be added *drh*, *paj*.

<sup>1</sup> See Table, § 353.

<sup>2</sup> Delbrück, p. 80.

<sup>3</sup> § 398.

<sup>4</sup> § 535.

<sup>5</sup> But see Delbrück, p. 79.

<sup>6</sup> Delbrück, l. c.

<sup>7</sup> Whitney, § 676.

<sup>8</sup> Roots, etc., pp. 219-222.

<sup>9</sup> § 786.

*rānī, rākṣ, van, vas* ‘clothe,’ *hrs*: also *bhī* (in the Ait. Brāhmaṇa and Ait. Aranyakā only). In the AV. occur *trp*, *trs*, *dhr*, *dhs*, *mah*, *vṛt*, *vrdh*, *gad*, *sah*: *mī*, *dīdhī*, *hid*: in the Brāhmaṇas *dhr*, *dhs*, *mah*, *ran*, *van*: *hid*.

There appears to be a diminution of the frequency of the forms including *ā* in the period C, and subsequently: and in the forms including *i* and *ī* in the period B, and subsequently.<sup>1</sup>

§ 346. The reduplicated syllable *ān* is found equally in all parts of the Rigveda.<sup>2</sup> Examples: *ānajē* 5, *ānajre*, *ānajānū*, *ānāṅga* 3 AV. 1, *ānāga*, *ānaçma*, *ānaçā* 4, *ānaçūh* 21: *ānaçyām*: *ānaçē* 6 AV. 7: *ānuçānā* AV. 3: *ānycūh* 4 AV. 1: *ānre*: *ānrdhs*: *ānṛdhlīh* AV. 1. All exx., RV. 50, AV. 13.<sup>3</sup>

§ 347. The reduplicated stem *jubhāra*, etc., belongs to the periods B and C, and to the finite verb only. There occur besides, *babhre* once iii. 1. 10, and the participle *babhrāñā* once, iii. 1. 8. There is no other participial form found.<sup>4</sup>

§ 348. Certain verbs having medial *a* between single consonants drop that vowel in the perfect<sup>5</sup>: and the RV. has several such forms which do not occur in classical Sanskrit. Examples: *tatne*, *tatnīṣe* 2, *tatnīrē* 1 and AV. 1, *paptima*, *paptūh* 2, *paptvāñs* 2, *mamndīthe*, *mamndte*, *vavnē* 3, *sac̄cima* 2, *sac̄culi*, *sac̄ce*, *sac̄cīrē* 6: 24 exx. in RV., 1 in AV. More than half the examples occur in period A.

§ 349. Reduplication is absent in a few finite forms (besides those from the perfect *vēda*), both in RV. and AV.: amongst which Delbrück and Whitney agree in admitting, though not altogether without question, the following: *arhire*, *cetatuh* AV., *takṣathuh*, *dhiṣe* 3, *dhire* 3, *nindima*, *yamātuh*, *skambhātuh*, *skambhuh*.<sup>6</sup> It will be seen that the phenomenon is in no case of importance, and that many of the alleged examples are capable of a different interpretation.<sup>7</sup>

§ 350. But the Veda has, besides *vidvāñs* three participial forms without reduplication, viz. *dāgvāñs*, *mūhvāñs*, *sāhvāñs*: the occurrences<sup>8</sup> being far the most common in period A.

§ 351. Strong forms outside the singular number occur in RV. exceptionally twice only: *yuyopimā* vii. 89. 5, *viveçuh* iv. 23. 9. These occurrences are in the period B.

§ 352. The participle *sasavāñs* is to be read as written in iv. 42. 10: *bnt* in vii. 87. 2, ix. 74. 8, x. 29. 2 *sasanvāñs* is required by the metre, and the latter reading is preferable in the remaining seven occurrences. The form *dadvāñs* occurs four times in period B.

<sup>1</sup> Whitney, § 788.

<sup>2</sup> See Table, § 353.

<sup>3</sup> Whitney, § 794 d.

<sup>4</sup> Whitney, § 790 b, Delbrück, p. 121: Delbrück adds *dabhuḥ* 2, and Whitney, *Roots, etc.*, p. 59, *takṣuh*.

## § 353. Table shewing use of Augment, Reduplication, etc.

Refer to §	Augmented historic tense- forms:	A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
887-840	(a) from pres. stems, includ- ing secondary conjugation	320	297	759	1056	255	177	742	1174
	(b) from perfect stems .....	14	7	11	18	0	4	3	16
	(c) from aorist stems .....	694	262	427	689	143	70	431	653
	All augmented forms .....	928	566	1197	1763	407	280	1176	1848
	Unaugmented forms:								
	(a) pres. stems .....	221	140	169	300	22	5	15	42
	(b) perfect stems .....	13	5	7	12	3	-	-	3
	(c) aorist stems .....	192	110	180	240	12	2	10	33
	All unaugmented forms .....	426	255	306	561	87	7	34	78
	Percentage of unaugmented forms:								
	(a) pres. stems .....	41	33	19		8	3	2	
	(c) aorist stems .....	24	20	25		8	3	4	
343	Augment ā-: <i>ānat</i> .....	9	3	10	13	4	2	--	6
	" other words .....	5	10	14	24	1	--	1	2
	All forms .....	14	18	24	37	5	2	1	8
344	Stem <i>dīdī</i> - 'shine' .....	21	8	17	25	1	--	6	7
	" <i>dīdhī</i> - 'notice' .....	5	3	4	7	5	4	7	16
	" <i>pīpī</i> - 'ewell' .....	18	6	6	12	2	1	--	3
	All forms .....	44	17	27	44	8	5	18	26
345	Perfects with ā of reduplica- tion-syllable .....	129	58	86	189	18	4	39	61
	Perfects with ī, ū of reduplica- tion-syllable .....	86	14	14	28	3	--	3	6
	All forms .....	165	67	100	167	21	4	42	67
346	Reduplication in dñ .....	23	4	17	21	6	--	13	19
347	Perfect <i>jahdra</i> , etc. ....	4	8	14	17	6	1	9	16
348	Medial a exceptionally omit- ted .....	15	3	4	7	1	1	1	8
349	Finite forme without redup- lication .....	5	3	3	6	1	--	1	2
350	Participles without reduplica- tion: <i>dāgvāns</i> .....	97	17	27	44	5	1	7	18
	<i>mīhvāns</i> .....	25	6	7	18	1	3	1	5
	<i>sāhvāns</i> .....	8	1	1	2	--	--	--	0

## Infinitives.

§ 354. The system of infinitives, as found in the RV. generally, is in rapid decay. Although this is in part a question of style, yet on account of the great variety of forme it may be most appropriate to treat of it here.

The infinitives of the RV. are derived from a variety of stems, and have generally the form of a dative or locative case: they

are not easily distinguished from the corresponding cases of verbal abstract nouns. Amongst the various forms, that in *-tave* is fairly prominent from the first : but it does not exceed in frequency the other forms until the period of the AV. A variation *-tavaī* (cf. above, § 320) reaches its maximum of favour in the period C.<sup>1</sup>. Throughout the whole Vedic period the classical form *-tum* is rare, though it becomes rather more common in AV.

It is noticeable that the form in *-tum* also occurs in Latin, and is therefore presumably primitive : yet it is entirely absent from the earliest hymns of the RV. This fact must be a warning against drawing conclusions as to date from isolated phenomena, however striking they may at first sight appear.

Brunnhofer made the attempt (KZ. xxv.) to arrange the various mandalas of the RV. in order of time by reference to the use of infinitive forms. Even if it could be admitted that the separate mandalas are homogeneous, the number of forms available is too small to enable us to draw satisfactory conclusions with regard to comparatively small bodies of matter. See Introduction, §§ 6, 27.

§ 355. If we compare the periods A B only, the changes are much less striking : but the forms in *-taye*, *-dhyai*, and *-vane* appear to be rapidly diminishing. The form in *-dhyai* is hardly found except at the end of Tristubh pādas : it is therefore the more remarkable that one-half of its occurrences are in the period A : and it is already rare in B.<sup>1</sup>

§ 356. In the enumeration of the forms I follow Delbrück,<sup>2</sup> with some corrections, and with the addition of examples from AV.

I. Infinitives in *-e* (a) from *-ā* stems, in *-ai*: 9 exx. from 5 stems.<sup>3</sup> (b) from consonant stems: Delbrück gives 53 stems, 174 exx.; of which *dṛçē* x. 9. 7 is only a repetition of i. 23. 21. Add *grbhē* viii. 10. 3; *abhipracákṣe* i. 113. 8, *vicákṣe* iv. 18. 4; *túje* viii. 4. 15; *dṛçé* i. 50. 5; iv. 11. 1; *vipfce* iv. 13. 3; *bhuje* i. 127. 11; *mahē* i. 180. 8; *muḍē* i. 145. 4; *prayákṣe* iii. 31. 3; *sanviúje* viii. 41. 6; *vrdhé* iii. 8. 10; *vidé* x. 23. 2; *gubhé* v. 52. 8; 57. 3; 83. 5; also for i. 126. 8 read i. 127. 6 and for i. 187. 1 read i. 167. 6. In AV. *tujé*, *dṛçé* 8, *ādhfse* 2, *ābádhe*, *yudhē*, *rucē*, *vṛdhē*, *gubhé* 2. All exx. in RV. 190, in AV. 17.<sup>1</sup>

II. Forms in *-am*. Delbrück gives 38 forms from 13 stems. Add *pratiram* viii. 48. 10, *gúbham* i. 23. 11, v. 55. 2, 3; *upaspi-jam* x. 88. 18, making 41 exx. in RV.; and from AV. *níkhidam*, *vicfam* 2, *samrúdham*.<sup>1</sup>

III. Forms in *-ah*. Delbrück gives 6 exx.<sup>1</sup>

IV. Forms in *-i*. Delbrück gives 9 exx.<sup>1</sup>

§ 357. V. Forms in *-se*, *-ase*. Delbrück gives 88 exx. from 27 stems. From these should be withdrawn *bhárase*, *sáhyase*: and to them should be added *rcfse* vi. 39. 5, *cákṣase* i. 7. 3; 112. 8;

<sup>1</sup> See Table, § 365.

<sup>2</sup> Cap. XVIII.

<sup>3</sup> Whitney (§ 971) questions *avasai* iii. 53. 20 (C<sub>1</sub>) and prefers *avaedh*.

vii. 66. 14; 81. 1; x. 9. 1; *jiváse* ix. 66. 36; x. 25. 6; 58. 2, 3; *doháse* i. 141. 2; *bhojáse* Vál. 3. 3; *dháyase* i. 94. 12; 130. 2; ii. 5. 7: giving 161 exx. in RV. AV. has *edíksase* 5, *jiváse* 8, so that these two words at least are still common: also *caráse*.<sup>1</sup>

§ 358. VI. Forms in -*taye*. Delbrück gives 61 from 4 stems: but his list is too limited, and it is more satisfactory to include all those words and uses which are practically confined to the dative singular. The list will then be as follows: *istáye* 20 AV. 1, *vásya-istáye* 4; *pítáye* 81, *pánpitáye* 4, *sómapitáye* 49 AV. 1: *vítáye* 31, *devánitáye* 22: *sátáye* 34, *dháinusátáye* AV. 1, *medhásátáye* 5, *vájusátáye* 34 AV. 1: in all, RV. 264, AV. 4.<sup>2</sup>

VII. There are two occurrences of -*tyai*, both in B, : the ending recurs in AB.<sup>3</sup>

VIII. For -*aye* Delbrück gives 17 forms from 5 stems: to which add *yudháye* x. 27. 2; 48. 6: *sanáye* i. 118. 12, 21; 124. 7; ii. 31. 8; iv. 26. 3; vi. 26. 8; vii. 79. 5; ix. 92. 1; 96. 20; x. 30. 11; making 29 exx. AV. has *drgáye*. The occurrences are almost entirely in the periods B, B, and C.<sup>4</sup>

IX. Of infinitives in -*dhyai*, Delbrück gives 72 occurrences from 35 stems. Add *yájudhyai* iv. 21. 5; 24. 5; *huvádhyai* i. 122. 5. For *shadhyai* vii. 32. 12, read vii. 31. 12. In all, 75 exx., of which two-thirds are in period A.<sup>5</sup>

§ 359. The remaining forms of the infinitivo are those from the -*tu* stems (discussed in § 368), and the following:

X. -*vane*: *dáváne* 28: also *tvrváne* vi. 46. 8; viii. 9. 13; 12. 19; 45. 27; x. 93. 16: *dhúrvane* ix. 61. 30.<sup>6</sup>

XI. -*mane*: 6 forms from 5 stems: four forms are in the periods C, C,<sup>7</sup>

XII. -*sani*: 10 forms from 8 stems.<sup>8</sup>

The form *gigráthe* iii. 31. 13 is quite isolated, if it is, as Delbrück seems to suppose, an infinitive of the reduplicated aorist: and there can be little doubt that the forms *dhartári*, *vidhartári* are either masculine or neuter nominatives of the -*tar* noun, and not infinitives.

§ 360. From the stem in -*tu* four forms are in use:

XIII. -*tave*: 33 stems, 114 forms in RV. In Delbrück's list under *yáttave* for ix. 82. 18 read the second time ix. 65. 16. In AV. I have noted *áttave* 5, *éttave*, *kártave*, *gántave*, *dáttave*, *dháttave*, *páktave*, *páttave*, *bhártave* 2, *yáttave* 2, *váttave*, *véttave*, *vádhare*, *sávitave* 3, *sátave* 4, *sétave*, *stárítave* 2: in all, 29 exx. The forms are almost equally used in all parts.<sup>9</sup>

XIV. -*tavai*: 13 stems, 25 forms in RV. In AV. I notice *jívitavai*, *pári-dháttavai*, *bhártavai*, *sátavai*.<sup>10</sup> See above, § 354.

XV. -*toh*: 9 stems, 12 forms in RV.<sup>11</sup> Add *jánitoh* iv. 8. 7.

XVI. -*tum*: 4 stems, 5 forms in RV.<sup>12</sup> In AV. this form is

<sup>1</sup> Whitney, § 975.

<sup>2</sup> See Table, § 365.

<sup>3</sup> The form *ótum*, vi. 9. 2, 3, may well be a noun, since we find *ótava!* AV. xiv. 2. 51.

still rare: there occur *kártum* 3, *dátmum* 2, *dráṣṭam*, *yácitum*, *spárdhitum*.<sup>1</sup>

#### Absolutives.

§ 301. The absolutives are forms hardly known to the earliest section of the Rigveda, but very common later. The form *-tvī* disappears in AV. The forms in *-tvā*, *-ya*, *-tya* are used according to the classical rules: but it is remarkable that the form in *-ya*, used with compounds, is far the most common in B<sub>2</sub>, whilst in the AV. *-tvā*, the form of the uncompounded verb, occurs nearly three times as often.<sup>2</sup>

§ 302. Of forms in *-tvī* Delbrück<sup>3</sup> gives 35, from 15 stems. Add *á-yudhvī* x. 108. 5, *visvī* i. 110. 4.

Of forms in *-tvā* Delbrück gives 8, from 7 stems. Add *gatvāya* viii. 80. 8. AV. has *gatvāya*. The formation belongs to period C.

Of forms in *-tvā* Delbrück gives 20, from 9 stems. Add *yuktvā* i. 177. 1, *snātvā* x. 71. 7. AV. has 140 exx., many of which shew *-tuā*: see above, § 87.

§ 303. From compound verbs Delbrück gives 71 exx. of forms in *-ya*, from 35 stems. Add the following: *abhi-khyāta* i. 155. 5, *prati-cákṣya* ii. 24. 7 (erasis), *ā-dāya* iv. 26. 6 (end of pāda d), 7, *punar-dāya* x. 109. 7, *vi-māya* x. 114. 0, *sam-māya* i. 07. 10; *ā-sádyā* vi. 52. 13 (erasis); 08. 11 (do.); *ni-sádyā* iv. 4. 12 (end of pāda c), *upasthāya* iii. 48. 3, *atihāya* i. 102. 20 (end of c), making 83 exx. in RV. In AV. we find *-úhya*, *-kṛtya*, *-krámya* 2, *-gṛhya*, *-gṛbhya*, *-grīhya* 2, *-chidya*, *-dāya* 3, *-dādya* 2, *-dīcya*, *-dhāya* 3, *-dhūya*, *-nīya*, *-pādya* 2, *-pāya*, *-bhājya*, *-bhūya* 2, *-māya* 2, *-mfjya*, *-rābhya*, *-rūhya*, *-lúpya*, *-vīzya* 3, *-vīsyā*, *-vītya* 2, *-sádyā* 3, *-sīcya* 5, *-sīdhyā*, *-stuya*, *-sfpya*, *-sthāya* 2, *-hāya* 4, 55 exx.

Of forms in *-tya* Delbrück gives 13 exx., from 5 stems. Add *abhi-itya* ix. 55. 4 (end of pāda b), *aram-kṛtyā* x. 51. 5, *ava-gātāya* vi. 75. 5 (end of pāda d). From the AV. we have *-itya* 14, *-tīya*, *-kṛtya*, *-gātāya* 5, *-jītya* 3, *-mītya*, *-yātāya*, *-vītāya*, *-crūtāya*, *-hītāya*: 29 exx.

#### Gerundives.

§ 304. Gerundives in *-tua*, *-tra* are most common in the periods B, C. There occur *kártua* 14, *kártva* 2, *jántua*, *jéntua*, *nántua*, *váktua* 3, *sbtua*, *hántua*, *hétua*: *jánitva* 4 AV. 2, *bhá-vitva*, *sánitva*: 31 in RV., 2 in AV.<sup>4</sup>

Those in *-enia* (rarely *-enya*<sup>5</sup>) are distinctly early. There occur *ükénia*, *idénia* 10, *ucénia*, *kirténia* 2, *carénia*, *dryénia*, *marménia* (and once *-ya*), *yámsénia* 2 and AV. 3, *yudhénia*, *varénia*

<sup>1</sup> See Table, § 865.

<sup>2</sup> *Snātvā* x. 71. 7 is an absolute.

<sup>3</sup> Ch. XVIII.

<sup>4</sup> See above, § 80.

(including compounds) 40, *vāyṛdhēṇia* : *ābhūṣēṇya*, *dīḍrkṣēṇya* 2, *papr̥kṣēṇya*, *rareṇya* 1 in AV., *saparyēṇya* : 67 in RV., 4 in AV.<sup>1</sup>

Those in -eya, -eyia, -ayia (-āyya) are not common: they belong chiefly to periods A and B. Examples: *dīḍrkṣēya*: *gapathēyā* 1 in AV., *stusēyin* : *atasāyī* 2, *ākāyī*, *trayayāyī*, *dakṣayī* 4, *dīḍisāyī* 2, *panuyāyī*, *panāyī* 2, *mahāyī*, *vitanusāyī* 4, *vidyī*, *gravdī* 13, *sphurāyī* 4, *a-hnava-yāyā*: *dakṣayī*, *prahāyyā* 1 in AV.: 40 in RV., 2 in AV.<sup>2</sup>

Gerundives in -ya (-ī) are equally common throughout all Sanskrit: for the treatment of the semi-vowel see above, at §§ 80, 84, 94.

### § 305. Table of infinitives, absolutives, and gerundives.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
356	Infinitives in -e: (a) from vowel stems (-ai). (b) from consonant stems.	1 88	2 29	4 66	6 95	-- 0	2 3	-- 17	2 29
	Infinitives in -am .....	18	6	13	19	1	3	4	8
	" -ai .....	2	1	2	3	1	--	--	1
	" -i .....	4	8	2	5	--	--	--	0
357	All from radical stems.	108	41	87	128	12	8	21	41
	Infinitives in -se, -ase .....	27	9	14	23	--	--	1	1
	besides cdkṣase .....	4	2	2	4	--	--	5	5
	" jñāvise .....	18	0	11	17	2	8	8	18
358	All forms in -se, -ase .....	47 200	17 20	27 40	44 60	2 3	8 1	14 4	24 8
	Infinitives in -taye .....	0	--	2	2	--	--	--	0
	" -tyai (ityai) .....	5	5	15	20	4	--	1	5
	" -aye .....	49	17	8	25	--	1	--	1
359	Infinitives in -vane .....	27	3	4	7	--	--	--	0
	" -mane .....	1	--	1	1	2	2	--	4
	" -sani .....	8	--	4	4	--	--	--	0
360	Infinitives in -tave .....	54 0	20 4	25 3	45 7	10 10	5 2	20 4	44 18
	" -tavai .....	3	8	4	7	2	1	--	3
	" -toh .....	0	2	2	4	1	--	8	9
362	Absolutives in -tvī .....	5	5	18	18	6	8	--	14
	" -tvāyā .....	1	--	--	0	4	4	1	9
	" -tvā .....	8	2	6	8	3	3	148	152
363	Absolutives in -ya, -yā .....	10 3	10 3	39 5	49 8	14 2	10 3	55 29	79 34
	All absolutives .....	27	20	88	88	29	28	231	288.
364	Gerundives in -tua, -tva .....	9	3	10	13	9	--	2	11
	" -enīa, -enya .....	37	9	18	27	2	1	4	7
	" -eya, -eyia, etc..	24	7	8	15	--	1	2	8

<sup>1</sup> In § 93 *tue*, not *tvē* should be read in v. 33. 6 (387. 6).

<sup>2</sup> See Table, § 365.

## CHAPTER V. VERB-STEMS. §§ 366-429.

§ 366. In order to obtain a general view of the history of the verb in Sanskrit, it will be convenient to classify its parts in a way somewhat different from that which is adopted in the grammars. To some parts of the verb detailed reference is not necessary: for instance the present imperatives and participles, the perfects, and the gerundives in -ya remain throughout unaltered in their chief features. In other parts the amount of material is excessive for our purpose: for instance, the relations between the voices, and the different methods of forming the present stem, can be sufficiently ascertained by considering part only of the evidence available. Nor can we conveniently separate here the passive voice from other -ya stems, nor the causatives and futures from the other kinds of secondary conjugation.

§ 367. The following division will now be followed.

I. The Present Indicative.

- (a) according to voices, including the Passive.
- (b) according to classes, not including the causatives or other forms with stem in *āya*.

II. Subjunctive, Optative, and Precreative Moods.

III. The Aōrists, Pluperfect, and Imperfect.

IV. Secondary conjugation, including (a) Intensives, (b) Desideratives and Futures, (c) Causatives, (d) Denominatives.

These divisions overlap in many particulars, and cross-reference then becomes necessary. The Infinitives and Absolutives have been fully treated in the last chapter; but a general view of their history is given by the table in § 429.

§ 368. In many parts of the verb-system change is at work very slowly, but not less surely. It is therefore of great advantage that we can extend our sketch over the periods of the Aitareya Brähmana, and of the Nala and Bhagavadgitā respectively. This is made possible by the collections of forms published by Prof. J. Avery, in vol. x. of this Journal.<sup>1</sup>

It appears from these collections that the amount of matter in the Aitareya Brähmana is more than one-third of that contained in the RV., or about equal to that contained in each of our sections A, B, C. The actual figures are therefore convenient for comparison, and will be given under the heading D (Avery's B). The amount of matter in the two classical books taken together is little more than one-third as much: for convenience of comparison the actual figures will therefore be trebled, and placed under the heading E (corresponding to Avery's C).

<sup>1</sup> This valuable collection of forms must, however, only be used as auxiliary to the classification of Whitney, *Roots*, etc.: even the classification in Whitney's Grammar needs frequently to be corrected by his later work.

## I. Present System.

§ 369. The present system outweighs in importance all the other parts of the verb put together: and its most important parts, the indicative and the imperative, do not as such undergo any great modifications. If the imperative forms are ten times more common in RV. than in the Aitareya Brähmaya, and more than twice as common in RV. as in the Nala and Bhagavadgītā, relatively in each case to the whole amount of matter, the cause seems to lie entirely in the style and subject-matter of the respective books. Such causes probably affect the present indicative less than any other part: and the number of present indicative forms is perhaps on the whole the best guide to the history of the present system..

§ 370. The whole number of occurrences of present indicative forms is given at the head of the table in § 387, calculated for each period as described above in § 368. It appears that the number of forms in C is greater by one-fourth, and in D by one-tenth, than in the other sections. This is in itself of little importance, but allowance must be made accordingly in tracing the relative growth of various parts of the system. The original numbers in E are not in all cases sufficiently large to indicate satisfactorily the average.

§ 371. The Voices. The stem *jāya* 'be born,' and in the RV. at least several other unaccented -ya verbs, have a passive meaning, but are technically reckoned by Indian grammarians as middle verbs. It seems right to consider them as passives: the words so included in RV. (besides *jāya-*) are *tya-* (in some occurrences), *kṣtya-*, *jtya-*, *pacya-*, *mtya-*, and *rtya-*.

§ 372. It appears from the table<sup>1</sup> that the middle voice is from the first in decay, and the passive in growth. Thus in A the middle forms are ten times as common as the passive, but in E the relation is only that of 11 : 8. The history is fairly parallel to that of Greek and Latin: in proportion as some middle forms become associated with a passive meaning and become mere common, there arises a disinclination to the use of the same forms to express an active or intransitive meaning.

§ 373. The growth of the active voice is not sufficiently regular or important to claim further attention: the decay of the middle voice extends to all forms, and its history for the Vedio period is shown as regards the greater part of them in the table in § 387. For the passive aorist-forms, which are decaying, see below § 400: for the remaining finite passive forms further details are given in the table in § 388.

§ 374. The Classes. The table in § 387 also shews the occurrences of present indicative forms arranged according to classes, but with no distinction of voice except for the passives, which

<sup>1</sup> § 387.

have a distinctive class-sign. The classes are arranged for convenience of comparison, and not in the Indian order.<sup>1</sup> The following points should be noticed :

(a) Root-verbs. The form *bhisūkti* is not included here, but under denominatives: on the other hand *mānmahe*, *huvé* (1. and 3. sing.) and *huvé* are included.

(b) Reduplicated verbs. The stems *jīghra-*, *tīgha-*, *pība-* had passed to the -a class before the Vedic period: but there are only a few occurrences of *dīda-* *dīdha-* and other verbs as transition forms, which for convenience sake are included in this class.

(c) Nasal classes. These are grouped together, as their general history seems the same. With the -nu class are included the forms of 3 pl. mid. in -nīre, though these might be considered as showing a transition stem -nri. There is not strictly speaking any -u class: verbs of the type of *tanu-* belong already in the Veda to the -nu class: there is an isolated occurrence of the form *tarute* in RV., and otherwise only the isolated stem *kuru-*: these may for our purpose be included with the -nu class.

(d) Classes in -cha, -i, -i. Although these formations hardly reach the importance of distinct classes, they are treated separately here: in the case of -cha verbs, without regard to the accent. The verb *prchīi-* is treated as belonging to the accented ī class, in accordance with its derivation. As the -i suffix is also used for the intensives, its full discussion is reserved.<sup>2</sup>

§ 375. The history of the classes is the more difficult to follow because of the extreme frequency with which a few verbs occur. Thus in the case of root-verbs the three stems *ās-*, *i-*, *yā-* alone account for more than one-half of the occurrences in periods D and E. A fairer view of the general history is often obtained by excluding such verbs; their occurrences are accordingly given separately in the tables.

§ 376. The number of stems of each class in use is also of importance as corroboration of conclusions drawn from more detailed statistics. It has seemed sufficient to collect from Whitney's Tables<sup>3</sup> the number of stems of each class found, (a) in RV. and AV., (b) in the Brāhmaṇas, and (c) in classical Sanskrit. These numbers are given in the table.

§ 377. We noticed above that the class of root-nouns was in decay, § 288: but a considerable number of single words of this formation are nevertheless firmly established. The same is the case with the root-verbs. The commonest of all (*ās-* *i-* *yā-*) fully hold their ground: but apart from these there is a great falling off in the number of occurrences. Thus such forms are fewer in

<sup>1</sup> Otherwise the arrangement in Whitney's *Roots, Verb-forms, etc.*, has been followed.

<sup>2</sup> See below §§ 416, 417.

<sup>3</sup> *Roots, Verb-forms, etc.*, pp. 211 seq.

C than in A or B, though the whole number of forms is greater in C by one-fourth. In D and E the falling off is still more marked. Again the number of stems used is less in this class in the Brāhmaṇas by one-third, though the whole number of stems is about the same.<sup>1</sup> If those stems alone are considered which are peculiar to the 'earlier language', the falling off is rapid throughout the Vedic period.<sup>2</sup>

§ 378. An immediate result of the decay of the root-verbs seems to appear in the increase of forms of the reduplicated class, which is shewn in periods B and C. However, there is a very rapid falling off in this class too in D, to which the stem *dauhā-* is alone an exception; and in E the class has almost disappeared.<sup>1</sup>

§ 379. The fall of the nasal classes took place still later. The stem *kṛnu-* is most common in C, and is replaced by *kuru-* in D. Apart from this verb, the class seems to retain its position maimed till the classical times, but then to decay.<sup>1</sup>

§ 380. The classes in -*a*, -*á*, -*ya*, -*cha* form, together with the passives, causatives, and denominatives, a group of dominant importance in Sanskrit. To each of these stems the modal and personal endings can be added with the same simplicity and regularity. They supplant accordingly the more varied and picturesque formations already described, just as the Greek verbs in -*ω* replace those in -*μ*, and the Latin regular verbs the irregular. The process was far advanced even in the earliest part of the RV.

§ 381. The unaccented -*a* class is the most important, at any rate in the number of stems, even in RV.: its progress in the later periods appears to be in this particular only, except for the great frequency of the verbs *bháva*-, *yíja*-, *gánsa*- in the Brāhmaṇas.

§ 382. On the other hand, the -*cha* and -*i* formations, though restricted throughout to a very small number of verbs, shew an increasing number of occurrences: whilst the -*i* forms disappear.

§ 383. The history of the -*á* class, so far as we can judge from the rather limited number of forms, seems to correspond to that of the reduplicating class: there is an increase up to period C, and then a falling off, particularly in the number of stems.<sup>1</sup>

§ 384. The -*ya* class shews the most remarkable progress of all. In particular the passives increase rapidly in the Brāhmaṇas, and still more in later times. The only passive in -*ya* unaccented that remains in use is *játya*-, but its use increases. The active and middle forms also shew a considerable increase in the number of occurrences, though there is not quite the same regularity.<sup>1</sup>

§ 385. In the general table the number of occurrences in the sub-periods B, B, C, C, AV, is not given, in order that the gen-

<sup>1</sup> See Table, § 387.

<sup>1</sup> See Table, § 389.

eral history may be more readily seen. Nor does it seem necessary to go further into detail with regard to those classes in which growth or decay is not continuous from the Vedic to the classical periods. But with regard to the root-verbs which are found in the 'earlier language' only, and the -cha, -ya, and -yā classes, full particulars are given in a subsequent table<sup>1</sup> and as there are no single verbs of great frequency in these classes, the lists there include all occurrences. As might be expected, the decaying forms diminish in number more rapidly in the middle voice, whilst the growing forms increase more slowly there.<sup>2</sup>

§ 390. Many verbs have in RV. more than one present stem, but later one only : the respective stems may be named early and late, in the sense that the former disappear before the classical period. In the list given below<sup>3</sup> the most important of these groups of forms are enumerated. Amongst 'early' stems none is included which is used in classical Sanskrit, except *bhāra-* as a simple verb (which rarely, if ever, occurs in classical Sanskrit) and *vāra-* which is once so found : but the occasional occurrences of some of these stems in the Brāhmaṇas and Sūtras is noted. Of the 'late' stems all occur in classical Sanskrit except *kṛnu-* (which gives way to *kuru-*) and *sāca-* : in these cases the number of instances available is sufficient to shew relatively late date, seeing that the correlatives occur in the Rigveda only.

The figures enclosed in brackets denote the verb-class; the letters following the respective stems the literature in which they are found, as in Whitney's *Roots, Verb-forms, etc.* and they are based upon Whitney's statement.<sup>4</sup>

<sup>1</sup> § 389. These lists include all the moods, the imperfect forms, and the participles.

<sup>2</sup> The -cha forms are an exception to the latter part of this statement.

<sup>3</sup> See Table, § 390.

<sup>4</sup> I have, however, assigned *rāvī-* to the -d class, and have once or twice omitted Whitney's mark of interrogation.

## § 387. Table of the present indicative forms.

Refer to §		Number of occurrences.				
		A	B	C	D	E trebled
370	All forms .....	2680	2716	3462	2968	2724
371	Active forms .....	1495	1846	2554	2141	1740
to Middle	" .....	1083	962	726	567	564
373	Passive "	162	114	182	260	411
	Class forms.	Number of stems.				
		RV.	Br.	ClscL		
377	I. Root class : <i>ds-</i> 'be' ..	1	1	1	282	208
	<i>t-</i> 'go' ..	1	1	1	87	147
	<i>yā-</i> 'go' ..	1	--	1	65	74
	<i>huvé</i> 'call' 1. 8. sing..	1	1	--	44	17
	<i>imahē</i> .....	1	1	--	57	29
	Rest .....	163	66	60	394	377
	All forms .....	108	70	63	629	852
378	II. Reduplicated class : <i>dīdhā-</i> 'put' .....	1	1	1	60	60
	Rest .....	45	27	15	115	148
	All forms .....	48	28	10	175	208
379	III. Nasal classes :					
	<i>kṛnu-</i> 'make'	1	--	--	87	53
	<i>kurn-</i> 'make'	1	1	1	--	13
	Stems with <i>-na</i> , <i>-n-</i>	26	23	13	61	64
	" <i>-nu</i> , <i>(-u)</i> .....	36	42	29	111	105
	" <i>-nā</i> , <i>-ni</i> .....	35	33	21	118	122
	All forms .....	90	69	44	827	844
381	IV. Unaccented <i>-a</i> class :					
	<i>bhāva-</i> ..	1	1	1	14	41
	<i>yāja-</i> ..	1	1	1	12	20
	<i>cālāsa-</i> ..	1	1	1	6	5
	Rest .....	291	276	823	870	849
	All forms .....	294	279	326	902	915
382	V. <i>-cha</i> class .....	5	7	7	36	39
	" .....	7	8	8	5	5
	" .....	7	1	1	12	16
	All forms .....	160	89	64	78	88
383	VI. Accented <i>-ā</i> class .....	141	221	116	297	297
384	VII. <i>-ya</i> class, active and middle .....	69	89	81	114	141
	<i>-ya</i> class, passive .....	7	1	1	17	32
	" .....	85	124	206	85	82
	All forms in <i>-ya</i> , <i>-yā</i> ..	161	214	288	216	255
					408	376
						708

## § 388. Table of the middle and passive voices.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
<b>MIDDLE FORMS:</b>									
372	present indicative.....	1083	386	576	962	157	100	469	726
393	" subj. (all forms) .....	97	26	50	76	18	5	23	46
394	" optative .....	52	6	18	24	2	2	7	11
409	imperfect indicative.....	189	86	105	251	40	41	158	230
	perfect "	292	151	230	381	52	23	134	200
	aorists .....	531	169	197	366	42	30	166	178
All mld. forms included above		2104	824	1236	2060	311	201	897	1409
<b>PASSIVE FORMS:</b>									
372	-yi stems: present indicative	85	32	50	82	16	16	119	151
393	" " subjunctive	1	--	2	2	--	--	--	0
409	" imperf. indicative	1	1	5	6	1	1	56	58
	" imperative .....	2	2	1	3	2	4	49	55
	" participles .....	23	34	21	55	9	1	41	51
-yi stems: all forms .....		112	69	79	148	28	22	265	315
371	-ya stems: all forms .....	41	35	53	88	16	17	76	109
All forms .....		153	104	132	236	44	39	341	424

## § 389. Table of class-forms shewing continuous change.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
<b>DECAYING FORMS:</b>									
877	Root-class: native .....	118	35	88	118	18	7	21	46
	" middle .....	112	81	44	75	12	7	10	29
	All forms .....	236	66	127	193	39	14	81	75
<b>GROWING FORMS:</b>									
882	-cha class: active .....	116	36	111	147	37	37	207	281
	" middle .....	7	2	16	12	7	4	11	22
	All forms .....	123	33	121	159	44	41	218	303
884	-ya class: active .....	144	51	184	185	58	56	254	368
	" middle .....	74	48	88	126	19	22	189	179
	" passive .....	41	35	53	88	16	17	76	169
	All forms .....	259	129	270	389	98	95	468	656

390. PRESENT STEMS: Doublets.

<sup>1</sup> The stem *pīma-* is not included amongst the notes of early date in the Introduction, because its great frequency in A is partly due to the subject-matter.

## II. Subjunctive, Optative, and Precative Moods.

§ 391. The first person singular of the subjunctive continues in use throughout all periods of the language. For the endings see above § 320.

§ 392. In the remaining persons there is a variety of endings, for which see above §§ 321–323; and we have besides two forms of the stem, one with a mode sign *a*, the other the same as the present stem, but used with secondary endings.<sup>1</sup> The forms of the latter group are identical with those of the unaugmented imperfect: and the group as a whole has been named the ‘pseudo-subjunctive’ or ‘improper subjunctive,’ on the assumption that the forms are borrowed from the imperfect indicative. That this is the case is not shewn by the Rig-Veda, in which this group of forms is decadent: but it cannot be doubted that the great variety of forms was one cause at least of the decadence of the whole mood, which is arrested only in the idiomatic use of *mit* with the ‘improper subjunctive.’<sup>2</sup>

§ 393. The forms of the present subjunctive rapidly disappear after the time of the AV.: the other tenses are in decay from the first, as is the “improper subjunctive” in all tenses. The use of the latter in prohibitions with *mit* is most common in period C, and with the aorist-forms: and traces of this use remain in the later periods.<sup>3</sup>

### Optative Mood.

§ 394. This mood becomes extremely common in the Brāhmaṇas, in which it replaces the lost subjunctive mood. It is somewhat less common in period B than in A, as is also the subjunctive: of this the subject-matter gives sufficient explanation.<sup>4</sup>

### Precative Mood.

§ 395. The 3rd person sing. of the root aorist optative from the mood-stem *-yā* ends in the RV. regularly in *-yāḥ*: these forms are specially given in the table, as well as included in the general enumeration. It will be seen that there is no form of the kind in AV., where we find once *bhūyāt*. This irregular but old form, by the side of the similar middle forms *-iṣṭhāḥ*, *-iṣṭa* (which are not included in the general enumeration, as there exist by their side the forms *-iṣṭhaḥ*, *-iṣṭa*) would seem to have been the beginning of the formation of a new ‘precative mood,’ which however never attained importance. Forms of the first person in *-āśam*, *-āśma* occur twice in RV. (*bhūyāśam*, *kriyāśma*) and many times in AV.: *jīvyaśam* 7, *badhyāśam*, *bhūyāśam* 15, *bhrūjyāśam*, *grāyāśam*: *rādhyāśma*, *bhūyāśma* 2, *rādhyāśma*. It will be noticed that several of these forms are from present stems. Besides these AV. has once *bhūyāśtha*, and the Nala once *brūyāśta*.<sup>5</sup>

<sup>1</sup> There are also a few occurrences of the “improper subjunctive” in the first person, included in the table.

<sup>2</sup> See Table, § 396.

## § 396. Table of Subjunctive, Optative, and Precative forms.

Refer to §		A	n <sub>1</sub>	B <sub>1</sub>	B	c <sub>1</sub>	c <sub>2</sub>	AV	C	D	E
	I. Subjunctive mood (2d and 3d persons) with $\alpha$ sign :										
303	present <sup>1</sup> active .....	221	73	141	214	60	33	240	333	17	0
	" middle .....	41	10	22	32	13	3	15	31	3	0
410, 411	perfect .....	64	20	30	50	7	1	5	18	0	0
401	aorist .....	157	47	93	112	23	8	74	105	1	0
	All forms .....	484	150	200	410	103	45	334	482	21	0
	II. "Improper subjunctive":										
303	present <sup>1</sup> active .....	107	21	35	56	18	5	20	47	0	0
	" middle .....	49	15	22	37	8	1	2	0	0	0
410, 411	perfect .....	1	1	1	1	1	1	1	1	0	0
401	aorist .....	184	67	92	159	21	10	37	68	0	0
	All forms .....	341	104	149	253	38	10	68	122	0	0
	III. "Improper subjunctive" with $mā$ :										
303	present <sup>1</sup> active .....	20	9	6	15	4	3	41	48	7	0
	" middle .....	7	1	6	7	2	1	0	0	2	0
410, 411	perfect .....	2	—	3	8	—	—	1	1	0	0
401	aorist .....	89	25	67	92	27	37	228	292	40	7
	All forms .....	127	35	82	117	33	41	270	350	58	7
	IV. Optative mood:										
394	present <sup>1</sup> active .....	192	71	81	152	35	17	170	228	689	309
	" middle .....	52	6	18	24	2	2	7	11	189	21
410, 411	perfect .....	1	—	2	2	—	—	0	0	0	0
401	aorist .....	28	12	17	29	10	1	6	17	0	0
	All forms .....	111	35	57	92	17	10	41	68	0	0
	V. Precative mood:										
395	[3. sing. act. In -yāh] .....	14	7	8	15	2	1	...	0	0	0
	middle forms -īshāh, -īṣha ..	12	—	3	3	1	3	2	6	0	0
	forms -dām, -dāma .....	1	—	—	0	—	1	20	30	0	0

## III. The Aorists and Pluperfect.

§ 397. That the aorist forms almost completely disappear in the Brāhmaṇas and in classical Sanskrit is well known. As but few forms are found there except those of the "improper subjunctive" with  $mā$ , which have been discussed above (§ 303), it is unnecessary to give statistics except for the Vedio period.<sup>2</sup>

<sup>1</sup> Under 'present' are included forms belonging to the secondary conjugations.

<sup>2</sup> No figures are available for AB.; but Whitney states (Gr. §§ 583, 587) that the usage is rare.

<sup>3</sup> Avery, JAOS. x.; see especially his table on p. 319.

§ 398. The process of decay itself takes place chiefly within the Vedic period, and forms the most striking example we have of change in language on a large scale. The main cause is no doubt the great multiplicity of aorist forms, and the general tendency of the language towards simplification. These causes do not affect all parts of the system equally or at the same time: and there are also other causes at work, common to the aorist and other parts of the verb-system, which sometimes hasten, sometimes check decay.

§ 399. In order to present a general view of the history of the aorist, we may combine the figures for the -a and -sa aorists, and the -is and -sis aorists respectively, and consider first the general history of these tenses, as shewn by the whole number of forms, and (in more detail) in the indicative, subjunctive, optative, and imperative moods of the active voice. Outside the aorist system the past tenses of the indicative are much more common in B than in A, the imperative forms in A than in B: but otherwise there is no great change in the Vedic period in these parts, and any change found now will be characteristic of the respective aorists or of the aorist system as a whole.

§ 400. It appears from the table (§ 408) that the whole number of aorist forms in A is about 2000, in B 1800, in C 1450: but the falling off is almost entirely in the middle and passive voices. As we might expect, the middle aorists decay much more rapidly than the middle presents. But whilst the middle forms of the reduplicated aorist have disappeared before the Vedic period, those of the -a, -sa, and -is aorists shew no marked change in the number of forms. But see the next section.

§ 401. In the active voice we first notice the disappearance of the participle: followed by a general falling off in the use of the subjunctive, optative, and imperative moods. These changes characterize the whole aorist system, though they are most marked in the -s and reduplicated aorists. On the other hand, the aorists indicative shew a considerable increase in period B (see below § 404) and fairly maintain their ground even in C. The use of the "improper subjunctive" with *mā* is three times as frequent in C as in B, and has even by the time of the AV. revived middle forms that were dying or dead, with the single exception of those of the reduplicated aorist. It is specially common with the -a, -sa, -is, and -sis aorists, with which its frequency entirely compensates the otherwise general disappearance of the middle forms.<sup>1</sup>

§ 402. Almost half the aorist forms belong to the root-aorist: but this loses ground more rapidly than most of the other aorists: cf. the root-presents, above § 377. Its most marked features are the great frequency of the imperative in A, the absence of active participles, and of unaugmented middle forms of the indicative.'

<sup>1</sup> See Table, § 408.

§ 403. The *s* aorist is marked by the comparative rarity of active indicative forms: in A its most common forms are the thematic subjunctive and the augmented middle indicative. Like the root-aorist it has few active participles or unaugmented middle indicative forms. General analogies favour ranking the "double-stems" in *-ase* and *-asāna* as 1. sing. subj. middle and participle of the *s* aorist respectively, and they are so reckoned in the table: they account almost entirely for the occurrences under these headings. The *s* aorist as a whole loses ground as quickly as the root-aorist.<sup>1</sup>

§ 404. The aorists in *-a*, *-sa* are variations of the root-aorist and *s* aorist respectively. They correspond to the *a* verb-classes, and are tenacious of life in comparison with the other aorists. Indeed the number of occurrences in C is about equal to that in A; but about three-fourths in C are instances of the augmented indicative active or of *mā* with "improper subjunctive," whilst in A there is far more variety. The *-sa* aorists are only few.<sup>1</sup>

§ 405. The *-is*, *-siṣ* aorists have a history much resembling that of those in *-a*, *-sa*; and they are actually more common later. They have no optative forms, but thematic subjunctives are comparatively numerous. The *-siṣ* aorists are only occasionally used.<sup>1</sup>

§ 406. We find the reduplicated aorist in the earliest period lacking almost completely not only all the middle forms, but also the subjunctive, optative, imperative, and participial forms of the active. Yet this defective or mutilated tense suffers no further loss in the Vedic period, but rather gains ground.<sup>1</sup>

§ 407. From this survey alone the approaching disappearance of the whole system could hardly be foretold. But its two most important branches, the root and *s* aorist, appear as decaying, and the general loss of flexional variety and elasticity within the separate aorist groups was poorly compensated by the temporary expansion of the less important of them, and the temporary favour of a special idiom. But the loss of the augmented indicative forms, which takes place in the period of the Brāhmaṇas, seriously diminished the flexibility and expressiveness of the verb-system.

§ 407a. The forms of the aorist imperative active are not included in the groups tabulated in the Introduction, as their great frequency in A is to some extent due to the character of the hymns.

<sup>1</sup> See Table, § 408.

### S 408. TABLE OF THE AORIST FORMS.

Root Aorist.												-a -sa Aorists.											
ACTIVE VOICE.						-s Aorist.						-a -sa Aorist.											
A	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>	A	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>	A	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>	A	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>
Augmented indicative.....	139	82142	224	57	33180	270	26	15	29	44	8	10	32	50	58	26	65	91	25	7	70	102	
Unaugmented ".....	62	5248	100	3	1	5	9	2	2	4	-	-	0	38	29	36	63	5	9	9	11	23	
Improper subjunctive.....	60	8238	60	6	5	25	36	2	1	3	4	..	2	10	12	22	4	0	5	8	9	56	78
" with <i>ma</i> .....	38	1125	36	5	9	36	50	4	4	1	5	4	1	1	6	2	5	7	3	2	5	5	
Subjunctive: 1st person.....	4	7	6	0	8	..	33	3	4	1	8	4	1	6	13	26	9	5	5	10	4	1	12
other persons.....	36	40	24	29	53	8	2	10	20	0	..	0	..	1	3	35	3	14	16	8	4	17	29
Optative.....	395	93	89	192	15	21136	172	2	..	0	..	1	..	1	27	6	16	22	5	1	6	1	1
Imperative (see §40a).....	6	1	2	8	..	..	0	2	..	1	2	1	..	1	12	6	7	13	1	..	1	..	1
Participle.....	6	30289	681	101	71425	597	110	44	78120	17	19	57	98	283	105188	293	67	28176	271				
All active forms.....	780	292108	114	223	24	15	24	63	179	40	50	90	13	11	45	69	31	6	12	18	3	1	16
MIDDLE VOICE.												-s Aorist.											
Augmented indicative.....	117	23	50	83	16	7	11	34	86	22	38	6	7	18	3	7	1	6	7	1	2	2	2
Unaugmented ".....	5	2	2	4	..	..	..	0	2	1	..	..	..	0	2	..	0	2	..	..	..	..	0
Improper subjunctive.....	7	..	..	0	..	..	..	0	6	2	..	1	..	..	0	2	..	..	0	..	..	..	0
" with <i>ma</i> .....	0	..	..	0	..	..	..	8	11	1	..	..	..	3	18	0	..	..	..	..	..	..	..
Subjunctive: 1st person.....	5	2	3	5	..	..	..	0	29	9	9	18	..	..	0	21	2	..	..	..	..	..	..
other persons.....	6	..	2	2	2	..	..	1	1	14	4	6	10	..	..	3	6	0	..	..	..	..	..
Optative.....	18	3	8	11	..	2	1	8	15	4	3	7	1	1	8	5	4	..	..	..	..	..	..
Imperative.....	98	9	7	161	4	6	3	18	25	4	7	11	1	..	0	0	..	..	..	..	..	..	..
Participle.....	113	59	42	161	4	..	..	..	..	..	..	..	..	..	..	4	11	4	..	..	..	..	..
All middle forms.....	292108	114	223	24	15	24	63	179	40	50	90	13	11	45	69	31	6	12	18	3	1	16	20
PASSIVE VOICE.												-s Aorist.											
Augmented indicative.....	68	28	42	70	9	2	3	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unaugmented ".....	33	7	18	25	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Improper subjunctive.....	5	2	2	4	..	..	..	2	14	16	..	..	..	..	..	..	..	..	..	..	..	..	..
" with <i>ma</i> .....	0	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
All passive forms.....	106	87	66	103	5	5	17	27	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals.....	1178	447	559	1006	130	91466	687	259	84126	210	30	30102	163	313	111200	311	70	29192	291				

§ 408. TABLE OF THE AORIST FORMS, CONTINUED.

ACTIVE VOICE.	-iṣ -stiṣ Aorists.						Reduplicated Aorist.						Totals.												
	A	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>	A	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>	A	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>	A	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>	
Augmented indicative . . . . .	33	21	26	47	12	6	64	51	20	36	65	15	4	64	82	208	173	298	471	117	60	302	569	569	
Unaugmented . . . . .	13	0	9	15	1	--	1	2	23	11	6	17	1	--	3	4	135	100	98	199	10	1	18	20	20
Improper subjunctive . . . . .	10	1	11	12	1	--	1	12	5	16	21	4	1	--	6	161	63	89	132	19	10	37	66	66	
" " with mā . . . . .	12	2	15	17	4	--	7	35	66	10	4	11	5	10	--	22	80	23	61	86	24	82	167	223	
Subjunctive: 1st person . . . . .	18	3	5	10	4	--	1	1	1	1	1	1	1	--	1	15	8	9	12	8	3	11	11	11	
" other persons . . . . .	0	0	0	0	0	--	0	0	0	0	0	0	0	--	0	136	41	57	98	19	8	69	96	96	
Optative . . . . .	21	3	16	18	2	--	2	11	1	1	1	1	1	--	0	76	27	43	70	16	6	30	52	52	
Imperative (see § 407a) . . . . .	6	0	0	0	0	--	0	0	0	0	0	0	0	--	0	456	103	133	236	22	23	142	187	187	
Participle . . . . .	108	33	32	120	25	14	113	157	113	54	74	128	27	11	79	117	1388	533	799	1312	237	143	835	1235	
All active forms . . . . .	108	33	32	120	25	14	113	157	113	54	74	128	27	11	79	117	1388	533	799	1312	237	143	835	1235	
MIDDLE VOICE.																									
Augmented indicative . . . . .	6	9	8	17	--	3	5	8	2	2	1	3	--	--	0	218	0	87	148	24	17	36	77	77	
Unaugmented indicative . . . . .	13	--	9	9	1	--	1	2	1	0	0	0	0	--	0	24	3	13	16	1	1	1	2	2	
Improper subjunctive . . . . .	12	--	0	0	0	--	0	0	0	0	0	0	0	--	0	18	2	1	3	8	3	47	53		
" " with mā . . . . .	0	--	1	1	1	--	1	9	0	0	0	0	0	--	1	1	3	2	2	12	25	1	1		
Subjunctive: 1st person . . . . .	1	1	--	2	1	--	1	1	1	1	1	1	1	--	0	87	13	12	25	1	1	5	9		
" other persons . . . . .	1	0	2	2	1	--	1	1	1	1	1	1	1	--	0	21	6	8	14	4	4	11	10		
Optative . . . . .	1	1	2	3	2	--	5	5	2	0	0	0	0	--	0	85	6	14	22	1	4	11	10		
Imperative . . . . .	0	--	0	0	0	--	0	0	0	0	0	0	0	--	0	27	9	8	17	1	1	6	6		
Participle . . . . .	0	--	0	0	0	--	0	0	0	0	0	0	0	--	0	149	67	52	119	7	6	19	19		
All middle forms . . . . .	23	18	20	33	2	3	20	25	7	2	1	3	--	--	1	1	532	169	197	306	42	30	106	178	
PASSIVE VOICE.																									
Augmented indicative . . . . .	68	28	42	70	2	2	2	2	2	2	2	2	2	--	2	2	2	2	2	2	2	2	2	2	
Unaugmented . . . . .	83	7	18	25	1	1	1	1	1	1	1	1	1	--	2	2	2	2	2	2	2	2	2	2	
Improper subjunctive . . . . .	5	2	4	4	0	--	0	0	0	0	0	0	0	--	0	0	0	0	0	0	0	0	0	0	
" " with mā . . . . .	0	--	0	0	0	--	0	0	0	0	0	0	0	--	0	0	0	0	0	0	0	0	0		
All passive forms . . . . .	106	87	66	103	106	106	106	106	106	106	106	106	106	--	106	106	106	106	106	106	106	106	106		
Totals . . . . .	181	51	102	153	27	17	133	182	120	56	75	131	27	11	80	118	2831	749	1062	1811	284	176	978	1440	

§ 409. **Imperfect Tense.** The aorist is in the indicative mood parallel to the imperfect and pluperfect tenses: the latter has a history similar to that of the aorists, and indeed can often not be distinguished from them. It is also parallel with the perfect, so far as that tense is used in a historic sense: but this distinction has not yet been investigated.

In later Sanskrit the pluperfектs and aorists disappear: and it is shewn by the table<sup>1</sup> that the process was at work during the whole Vedic period. For although the absolute number of aorist indicative and pluperfect forms is greater in B than in A, yet, relatively to both, the imperfect has gained much ground, having in A only 40 per cent. of the occurrences, but in B, 54 and in B<sub>2</sub>, 63 per cent.; after which period the proportion does not greatly change till the time of the Brāhmaṇas.

§ 410. **Subsidiary Perfect Tenses.** It is not easy to distinguish the subsidiary tenses of the perfect from other tense-forms which shew a reduplicated stem: and as the standpoint adopted by Whitney in his *Roots*, *Verb-forms*, etc., differs very considerably from the statements in his Grammar, and includes a much larger number of forms within the perfect group, it will be convenient to collect the forms recognized in his later work as a starting-point.

The list of words that follows is extracted from it, and the following signs are used to denote the tenses: P pluperfect, U unmarked indicative, I improper subjunctive, S subjunctive, O optative, R imperative: the corresponding lower-case letters denote the middle voice. Forms in which a thematic *a* (other than *a* of the subjunctive) or *i* occurs are marked "with *a*" and "with *i*" respectively.

*añj* 'anoint': O *anajyāt*.  
*au* 'attain': s *anucāmāhai* O *ānucyām*.  
*ī* 'move': P *ālyeh*.  
*kan*, *kū* 'enjoy': U *cakān* (2s.) 5, (3s.) 4, S *cakānāḥ* 3, -at 3, -āma, -anta  
 O *cakānyāt*, R *cakāndhi* 2.  
*kr* 'make': p *deakrīrau* U *cakaram* O *cakriyāt*.  
 with *a*: P *acakrat*.  
*kṛp* 'lament': with *a* u *cakrīpāta*.  
*kīp* 'be adapted': S *cakrapāt* (AV. 1).  
*krand* 'cry out': S *cakradāḥ*  
 with *a*: U *cakradāḥ*, -at 4.  
*kram* 'stride': s *cakramanta*.  
 with *a*: u *cakramanta*.  
*kram* 'endure': o *cakramithāḥ*.  
*gam* 'go': P *ājagan* (2s) 3, 3s 6, *ājaganta*, *ājagantana*: p *ājagmīraṇ*  
 O *ājagamyām*, -at 7 (and AV. 3), -ātam, -uh 2.  
*gā* 'go': O *jagāyāt*.  
*gur* 'greet': S *jugurāt* O *juguryāt*, -āt.<sup>2</sup>  
*grabh* 'seize': P *ājagrābham* (AV. 3) O *āgrabhīyāt* 2.  
 with *i*: P *ājagrabit*.  
*gras* 'devour': o *jagrasita*.  
*ghas* 'eat': O *jākṣyāt*.

<sup>1</sup> § 413.

<sup>2</sup> Whitney, Gr. 818, gives also the form *jugūrthāt*, which I do not find.

caks 'see': P acucaksam.  
 cil 'perceive': P uelkel I elketam S cikitah, elketusi, -at 7, -ati 8, -athah,  
     R cikidili 9.  
     with a: P acikitat.  
 chad 'seem': O echaulyat.  
 jan 'give birth': S jaýnat Br.  
 juç 'enjoy': S juçosah 4, -asi, -at 7, -ati 2, -athah, -atha, -an, jujuñan :  
     s juçosato<sup>1</sup> R juçustuna 2.  
     with a: R juçoyatum.  
 jñ 'be swift': S juçaval.  
 tan 'stretch': S tatinah 2, -at, -ama 2, -an 4 : s tatinanta: O tatanyuh.  
 tap 'beat': s latipate.  
 tu 'be strong': U tutoh, tutot 2.  
 tuç 'urge': O tutulyat.  
 tñ 'pass': O tuturyat 4, -ama.  
 tvix 'stir': with a: p itivisanta.  
 dabh 'harm': s dudabanta.  
 dæç 'maka offering': S dudäçah, -at 5, -ati 2.  
 dñli 'shine': S dñdityah, -asi, -at 8 AV. 1, -atti: also Br.  
 dhñ 'make firm': with a, p idadhñanta.  
 dhan 'run': O dadhanyuh.  
     with a: U dadhñinal.  
 dhñ 'put': R dadhñvii 7 and AV. 1, dadhidhvam 3, dudhñhvé 4.  
 dhñl 'shake': I dñdhñt 2; o dudhñvila.  
 dhñs 'dare': S dadhñrgat, -ati 5 s dñdhnysale (AV. 1), -anta (AV. 1).  
     with i: I (with mñ) dadharñit 2.  
 nam 'bend': S nanimah.  
     with a: U nanimul.  
 pat 'fly': O papatyat AV. 1.  
 pñ 'drink': O paplyat 2.  
 puç 'thrive': O impusyah.  
 pu 'cleanse': P ipupot (also MS.).  
 pr 'fill': O pupuryah.  
 pre 'mix': O papreyam (and AV. 1), -at.  
     with a: S papredsi.  
 prl 'please': S pipraval, -at 2, R piprihi 2.  
     with a: r pipriyasa.  
 budh 'know': S bibodhah, -ati.  
 bhug 'bend': with i: P dibubhojih.  
 bhú 'be': O babhuyah, -at 2 R babhñtu.  
 bhr 'bear': P ajabhartana S jahbárat 2.  
 manñ 'be liberal': S mämähah: s mämahantha.  
     with a: r mämahasva, -antam 2.  
 mad 'be exhilarated': P anamanduh S mamandat.  
 mne 'release': P amumuktam 3: S mumneah, mumocat, -ati 2: R  
     mumugdhi 5 (and AV. 1), mumoktu 2 (and AV. 2), mumuklam  
     2 (and AV. 3).  
     with a: R mumocatam, -ta.  
 mr 'crush': S mumurat ?  
 mri 'wipo': s mämijita.  
 mrd 'be gracious': O mamryah.  
 yuj 'join': s yuyójate 2.  
 ran 'take pleasure': P arðrayah (also Br.): I rãrdn: S rãrdyah, -at 2 :  
     R rãrandhi 3, rãrantu.  
 ric 'leave': O riricayam, -ta.  
     with i: P arireciti 3.  
 ruc 'shine': s rurucanta O rurucyah.  
 van 'win': S vãvñalih R vdandhi.  
 vñç 'bellow': with a: p avâvaçanta 3: u vâvaçanta 2.  
     with i: p avâvaçitam.

<sup>1</sup> Perhaps a participle.

2 *vid* 'find': S *vividat*.  
*vig* 'enter': O *vivīyāh*.  
  with i, P *avivegh*.  
*vīg* 'be active': with i, P *āvīvesh* 3.  
*vīj* 'twist': O *vavṛijñih*, R *vavṛitam*.  
*vṛdh* 'grow': s *vāvṛdhīdhe*, o *vāvṛdhīthāh*.  
  with a: u *vāvṛdhīnta* 3, i *vāvṛdhīnta*, S *vāvṛdhīlti*, r *vāvṛdhīsra*  
  4 (and part. *vāvṛdhīvit* and *vāvṛdhītē* AV.).  
*vṛṣ* 'rain': with a, r *vāvṛṣasva*.  
*gam* 'labour': s *gacimate*.  
*gād* 'order': I *gacih*, R *gacadhī* 2.  
*gne* 'glean': o *guṇeṣita* 2, R *guṇegdhi*.  
*gn* 'swell': S *guṇevat* 3, -itum: O *guṇeyāma*.  
*gru* 'hear': p *guṇevati*: S *guṇevat*: O *guṇīyāh*, -itum 2.  
*sad* 'sit': O *sasadyāt* AV. 1.  
*sah* 'prevail': S *sāsīhāh*, -at 3: O *sāsahyāt* 2, -āma 4: prec. *sāsahīṣṭhāh*.  
*st*, *st* 'bind': I (with mā) *sīzēt*?  
*sūd* 'put in order': S *sūṣūdāh*, -at, -ati 3, -atha; *sūṣūdāta* AV. 1.  
*erj* 'send forth': p *śasram* 2: O *sastiyāt*.  
*stabh* 'prop': with a: U *tastambhat*.  
*sprdh* 'contend': with -a: *dpasprdhētām*.  
*spṛc* 'touch': S *pasprēcat*.  
*svap* 'sleep': u *susuptihāh* B. S.  
*svar* 'sound': U *sasvdr*.  
*han* 'smite': S *jaghnat*.  
*hīn* 'injure': with i, I (with mā), *jīhīnslik* AV. 1.

Other forms, assigned to the perfect group in the Grammar, are now assigned otherwise: e. g. *āpīpruta*, *vivyaēanta* to present stems, as also *vavṛṣasva*, etc.: *śasvajat*, *rīriṣīta* to the reduplicated aorist. Forms that should perhaps have been added are from *pat* 'fly', *apaptat*, *paptat*, etc. (RV. and AV.), and *ānat* from *āg* 'attain.'

It is clear that a stem *nāvṛdhā-* was formed in RV., and the occurrences that may be attributed to it most easily are accordingly omitted in the tabulation. Similarly the forms *mumbatam*, *mumbatā* suggested a transition stem *mumoca-*, and are omitted: as are also the forms attributed to the perfect of *dhā-*, which have been already discussed, § 334. The forms attributed to the perfects of *dīdī*, *marīh*, and *vīg*, although doubtful, are included.

§ 411. The table of subsidiary perfect forms shews that the subjunctive, optative, and imperative moods are fairly established in the active voice: but the subjunctive becomes much less common in period C. In the middle all these moods are rare, and occurrences are hardly found after period B.

The group of forms consisting of the pluperfect tense and its allied "improper subjunctive" is remarkably small, especially if we compare it with the corresponding aorist group. It also includes no less than three formations, and is equally divided between them, namely, those of which the forms *acikei*, *acikitat*, and *arīceik* are typical. It seems still doubtful whether we have here the last remains of a decadeot tense, or merely a collection of chance forms: and it is in favour of the latter hypothesis that the number of forms in C is not much less than in the earlier periods respectively.

## § 412. Past tenses of the indicative.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
400	Imperfect: augmented active forms .....	207	256	644	000	225	136	533	804
	Imperf.: augmented middle and passive forms .....	53	41	115	150	30	41	209	280
	Imperf.: unaugmented active forms .....	134	94	114	208	11	4	10	25
	Imperf.: unaugmented middle and passive forms .....	87	46	35	101	11	1	5	17
	Total .....	541	437	928	1365	277	182	757	1210
410, 411	Pluperfect: augmented forms .....	14	7	11	18	9	4	3	16
	" unaugmented " .....	18	5	7	12	3	--	-	8
	Total .....	27	12	18	30	12	4	3	19
401	Aorists: augmented forms .....	594	262	427	680	143	79	481	658
	" unaugmented " .....	192	116	130	240	12	2	19	33
	Total .....	786	372	557	929	155	81	450	680
	Percentage of imperf. forms .....	40	54	68	64	60	63		

## § 413. Subsidiary perfect forms.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
410, 411	Active voice: augmented plqpf. ....	10	8	0	12	7	4	3	14
	Active voice: unaugmented plqpf. ....	11	5	5	10	8	--	--	8
	Active voice: improper subjunctive .....	1	1	--	1	1	--	--	1
	Active voice: improper subjunctive, with mā .....	1	--	1	1	--	--	1	1
	Active voice: subjunctive .....	56	19	85	54	7	1	8	11
	" optative .....	19	11	15	26	10	1	0	17
	" imperative .....	14	4	10	14	5	2	7	14
	All active forms .....	111	43	75	118	33	8	20	61
	Middle voice: augmented plqpf. ....	4	4	2	6	2	--	--	2
	Mid. voice: unaugmented " ....	2	--	2	2	--	--	--	0
	" " improper subj. ....	0	--	--	0	--	--	--	0
	" " with mā ....	1	--	2	2	--	--	--	0
	Middle voice: subjunctive .....	8	1	4	5	--	--	2	2
	" optative .....	5	1	2	8	--	--	--	0
	" imperative .....	2	1	2	3	--	--	--	0
	All middle forms .....	22	7	14	21	2	--	2	4
	All forms .....	133	50	89	139	35	8	22	65
	All forms of subjunctive, optative, and imperative moods .....	106	37	68	105	22	4	18	44

## IV. Secondary conjugation.

§ 414. **Intensives.** In the 'earlier language' there are, according to Whitney (*Roots*, etc.), 105 intensive stems not used later: 21 are common to all periods, and 41 appear only later. Whitney further states (*Grammar*, § 1001) that "intensives in the later language are extremely rare."

That the intensive formation was of importance earlier may be inferred from the occurrence of intensive adjectives (*yariyādū*, *vānīvān*) and gerunds (*carikītya*, *vituntashīyya*, *marmrijīnya*): these are not sufficiently numerous to be discussed here. The AV. has *āvīcīcāta*, *sanisayadā*, *sanisrusā*, all with thematic *a*.

§ 415. Of the three intensive types (*dīdar*, *dardar*, *duridar*) all are in use in RV., but the third shews some decline in period C. The intensives as a whole are more common in B than in either A or C: and this is especially the case with the middle participles. The subjunctive mood is fairly common, the optative hardly found.<sup>1</sup>

§ 416. In spite of the general decrease in period C, there is an increase in those present forms which employ optionally thematic *i*: viz. the singular of the indicative<sup>2</sup> and imperative, and the second and third persons singular of the imperfect: whilst the middle forms with *-ya* suffix die out. This increase is common to all the *-i* forms, except those of the pluperfect, as is shewn in the table in § 419. In period A more than half the *-i* forms belong to the two verbs *jihavīni*, *brāvīni*: and this formation may be compared with the feminine adjectives in *-vī* from *-u* stems. Though never of importance, it served a useful purpose in providing an imperfect for *as* 'be', which is however rarely found before the period C. It may however have existed sooner, for only the third pl. *āsan* is used at all freely in RV., and the few occurrences of the earlier form *āh* are also in late hymns of the RV. Whilst therefore thematic *i* is to be recognized as a growing formation, it may well have existed in the earliest period side by side with the elements *-i*, *-cha*, and the element *-ya* as used with intensives.

§ 417. The forms containing thematic *-i* are: *brāvīni* 6 AV. 7, *-isi* 1 AV. 1, *-iti* 2, *-ītu* 4 AV. 2, *-ītana* 2: *ābrāvī* AV. 1, *-īt* 14 AV. 12, *-īta*, *-ītana* 3: *āsīh*, *āsīt* 45 AV. 26: *ānīt* 2, *amīśi*, *tavīti*, *avamīt*: *jihavīni* 11 AV. 12, *-iti* 6 AV. 1, *-ītu* AV. 1, *ājihavīt* 5: *cīkāyīmi* 2, *-iti* 1 AV. 1: *carcarīti* AV. 1; *dardarīni*, *-iti*: *dodhavīti*: *nānnamīti*: *nōnavīti*: *tartarīti*, *-īthāh*: *pāpatīti*: *jārbhūrīti*: *bōbhavīti*: *yārīyāmīti*: *āyoyavīt*: *rārājīti* AV. 1: *rārāpīti*: *rōravīti* 5, *droravīt* 3: *līlapīti* AV. 1: *āvāvacīt*: *rāvādīti* 1 AV. 1, *-ītu* AV. 1: *sosavīti*: *jānghanīhi* AV. 1, *taristānihi* AV. 1: *āsīna* 7 AV. 9: *gāritoh*, *suhāvītu*, *stārītave* AV. 2, *hāvītave*: in all, RV. 143, AV. 82: besides the pluperfect forms enumerated above, § 410, viz. RV. 10.

<sup>1</sup> See Table, § 418.

<sup>2</sup> Once also 2 du. *tartarīthāh*.

## § 418. Table of the intensives.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
415	All forms of type <i>dādar</i> .....	76	33	68	101	20	11	43	74
	" " <i>dardar</i> .....	42	20	48	68	12	8	11	31
	" " <i>duridar</i> .....	35	16	19	85	8	6	8	22
416	Active forms: participles .....	56	29	38	07	12	6	14	32
	" subjunctive .....	13	2	13	15	2	3	4	9
	" present without i..	12	2	12	14	7	7	5	19
	" " with i.....	14	6	18	24	9	2	22	38
	" other forms.....	13	5	11	16	1	1	6	8
	Middle forms: with -ya .....	9	2	8	10	..	..	2	2
	" other participles .....	18	14	25	39	9	6	8	23
	" other forms .....	18	9	19	19	..	..	1	1
	All intensive forms .....	153	69	135	264	40	25	62	127

## § 419. Table of forms with thematic i.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
374d, 417	Pres. ind., imperative, and im- perfect:								
	<i>briñvimi</i> , etc. .....	6	3	5	8	17	2	23	42
	<i>as̄ti</i> , <i>as̄it</i> .....	1	..	5	5	16	36	26	66
410 417	other words .....	0	..	..	0	3	2	..	5
	Pluperfect .....	5	1	2	3	1	1	..	2
	Intensive: <i>jōhavīmi</i> , etc. .....	9	0	5	11	2	..	14	16
	Rest .....	5	..	13	13	7	2	8	17
	Participle <i>as̄tā</i> .....	..	2	2	4	2	1	9	12
	Inf. <i>havītave</i> , etc. .....	1	..	1	1	..	1	2	3
	All forms .....	27	12	33	45	42	39	82	163

§ 420. Desideratives. Whitney notes 48 desideratives as used in the earlier language, to which *īṣa-* should probably be added: and 44 as used in all periods. Of these 93 stems RV. uses only 42, of which only 10 are used in AV., besides 11 others used there for the first time. There are therefore about 40 new stems in the later books of the 'earlier language', besides 30 first used in the later language. That the formation is old is shown by its appearing also in adjectives, as *āguṇukṣūni*: but it is clear that its application to new stems was in vigorous progress in later times.

§ 421. In RV. we find about six desideratives established, viz. *iyakṣa-*, *īṣa-*, *mimikṣa-*, *vivāṣa-*, *yikṣa-*, *sīṣa-*. In several of these a desiderative meaning is hardly perceptible. Almost all the examples we have of the subjunctive, optative, and imperative moods, and of the middle voice are from the verbs just named: almost all other forms are of the present and imperfect (and with the latter the unaugmented imperfect and improper subjunctive) and of the participles of the active voice. Perfects are formed only from *mimikṣa-* and *īṣa-*. The desiderative adjectives in *-su* are few but increasing in number.<sup>1</sup>

<sup>1</sup> See Table, § 428.

It appears therefore that a distinct desiderative meaning was first employed only in certain prominent parts of the verb-system: and that as this use became more fully recognized, most of the earlier verbs of similar form, in which a desiderative meaning was at most slight, perished: *yikṣa* (the only verb of this class which remained to classical times) was no doubt preserved by the disguised form of its reduplication, which enabled it to pass muster as a distinct formation. The decay of *sīṣṭsu*, in which the secondary meaning is pronounced, seems less explicable.

§ 422. Future. The future in *-sya*, *-iṣya* appears to be cognate to the desideratives both in form and meaning.<sup>1</sup> As is the case with the intensives and desideratives, a large proportion of the forms are participles. It is an increasing formation, but even in the AV. is still rare. That it was originally a secondary formation appears from its possessing in RV. an augmented tense, e.g. *ābhariṣyat*, and a subjunctive, e.g. *karisyāt*. As a tense, the future does not exist<sup>2</sup> before period C.

§ 423. The Causative conjugation or tenth verb-class is fully established in all parts of the RV. Middle and subjunctive forms are fairly frequent: but the perfect is wanting, and the optative and the middle participle are very rare. The only optatives noticed are *citāyema* (-ā) ii. 2, 10, iv. 36, 9, *dhārayet* iv. 4, 8, *marjayema* iv. 4, 8, *mānayet* AV., *vegayet* AV., *sprhayet* i. 41, 9: and the only middle participles *kāmāyamāna* (AV.) *māhāyamāna*, *yātāyamāna*, *vardhāyamāna*, each occurring once. Several verbs use the middle indicative forms side by side with the active participles. There is a passive participle in *-ita*.

§ 424. This class is closely connected with the *-a* and *-ya* classes of verbs, and with the denominatives. That the suffix *-aya* had not originally any causative meaning may be inferred from its frequent occurrence with middle endings, and from its meaning often coinciding with that of the simple verb. The large increase in occurrences found in A and B seems due to causatives proper, but it is not always easy to distinguish these from the verbs which have causative form only. The following list is merely tentative:

Verbs in *-aya* without distinctive causative meaning: *āmāya*, *āvāya*, *isāya*, *irāya*, *kāmāya*, *kūdāya*, *krpāya*, *gūrdhāya*, *grbhāya*, *ghārāya* (AV.), *ghosāya*, *coddāya*, *chādāya*, *chādāya*, *chandāya*, *jambhāya*, *tārāya* (AV.), *turāya*, *dañsāya*, *damāya*, *dambhāya*, *dhanāya*, *dhārāya*, *dhāvāya*, *palāya*, *panāya*, *pidāya* (AV.), *pūrāya* (AV.), *barhāya*, *mādāya*, *mādāya* (AV.), *mandāya*, *marjāya*, *mṛdāya*, *marcāya*, *yātāya*, *yāmāya*, *yāvāya*, *yāvāya*, *yopāya*, *rāñhāya*, *riṣāya*, *rucāya*, *rejāya*, *vārāya*, *vajāya*, *varjāya* (AV.), *vardhāya*, *gātāya* (AV.), *camāya* (AV.), *gundhāya*, *gobhāya* (AV.), *gnathāya*, *grathāya*, *sūdāya*, *sārāya*, *standāya*, *spācāya*, *spṛhāya*, *sphurjāya*, *syandāya*, *svadāya*, *svanāya*, *svarāya* (AV.), *hārāya*.<sup>3</sup>

<sup>1</sup> E.g. *avisyāt*, *sanīṣya*, *-at*, here considered after Whitney as futures, are treated by Grassmann as desideratives.

<sup>2</sup> See Table, § 428.

§ 425. Causatives with the element *p* are found in the present and aorist : the formation<sup>1</sup> belongs to period C.

§ 426. Denominatives. These forms shew a marked diminution in period C, which however does not affect those verbs in which *y* is preceded by a long vowel (*a i u*). The tendency to lengthen the thematic vowel is parallel to that observed in the subjunctive. The participles are in proportion very common in A and B, but fall off considerably in C.

In the table of denominatives are included the stems *gopāyá*, *pátya*, and *haryá*. ‘shine yellow’, and the form *bhisúkti*.

§ 427. Closely connected with the denominative verbs are a group of adjectives in *-yá*, and of substantives in *-yat*. These too are less frequent<sup>1</sup> in period C.

§ 428. Table of Desideratives, Futures, Causatives, and Denominatives.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
421	Desideratives :								
	Stem <i>iyakṣa</i> v. B. ....	11	4	8	7	..	..	1	1
"	<i>ixa</i> v. B. U. ....	18	7	7	14	2	..	2	4
"	<i>mimikṣa</i> v. B. S. ....	8	3	6	9	..	..	..	0
"	<i>vividṣa</i> v. ....	82	9	12	21	1	1	1	3
"	<i>gikṣa</i> v. + ....	24	13	15	23	7	4	10	21
"	<i>sigdṣa</i> v. B. ....	20	6	5	11	1	2	3	6
	Other stems ....	31	11	30	47	7	15	44	66
	All forms ....	189	53	84	137	18	22	61	101
	Active voice :								
	pres. ind., etc., of verbs named	60	22	18	40	6	6	0	21
	" " other verbs.	25	0	22	31	5	13	31	49
	subjunctive, " of verbs named	31	15	20	35	3	..	0	9
	" " other verbs.	1	..	4	4	..	..	5	5
	Middle voice: verbs named.....	17	5	10	15	2	1	2	5
	" other verbs.....	5	2	10	12	2	2	8	12
421	Adjectives in <i>-su</i> ....	8	7	0	13	1	1	12	14
422	Futures: finite in <i>-syā</i> .....	0	..	..	0	3	..	16	19
"	" <i>-isya</i> .....	0	2	5	7	5	..	38	43
"	participles in <i>-syā</i> .....	3	1	8	4	..	3	7	10
"	" <i>-isya</i> .....	4	2	5	7	2	2	8	12
	All forms .....	13	5	18	18	10	5	69	84

<sup>1</sup> See Table, § 428.

423	Causatives in -aya.....	177	127	183	310	39	66	351	456
424	Other verbs .....	210	101	171	272	46	36	208	290
425	Causatives with <i>p</i> (present, etc.) .....	3	4	9	13	7	4	40	52
	" " (orist) .....	1	1	..	1	1	1	6	8
	All causative forms .....	391	233	363	596	98	107	605	805
426	Denominatives:								
	Stems in -aya, -iya, -nya, -eya .....	91	24	39	63	9	6	18	83
	" -aya, -iya, -nya .....	78	41	65	106	18	9	53	80
	" -sya .....	58	28	37	65	9	4	21	34
	Other stems .....	76	34	49	83	8	4	25	37
	All forms .....	273	127	196	317	44	23	117	184
	Finite forms .....	180	44	90	131	24	15	71	110
	Participles .....	143	83	100	183	20	8	46	74
427	Adjectives in -yu.....	187	56	72	128	11	8	40	60
	Substantives in -yu.....	36	15	19	34	2	1	12	15

§ 429. Table shewing the general history of the verb.

Refer to §		A	B	C	D	E (trebled)
376	Present indicative (active and middle) .....	2578	2602	8296	2648	2818
398	Present subjunctive ( <i>a</i> forms) (active and middle) .....	262	246	364	20	---
394	Present optative (active and middle) .....	244	176	239	828	386
371, 372	Passive (except the sorist) .....	158	280	424	388	576
411	Moods of the perfect .....	103	105	44	---	---
411	Piuperfect .....	27	30	19	---	---
407	Aorists .....	2031	1811	1440	125	111
409	Imperfect .....	541	1865	1216	1078	744
415	Intensive .....	153	264	127	21	15
421	Desiderative .....	189	187	161	29	24
422	Future (-sya, -isyā) .....	13	18	84	125	525
423, 424	Causative (including all verbs in -aya) .....	387	582	746	401	597
425	Causative with <i>p</i> (excluding aorists) .....	8	13	51	69	12
426	Denominative .....	273	317	184	56	108
356-366	Infinitives .....	566	854	155	21	309
362, 363	Absolutive .....	27	83	298	326	1508
	All forms tabulated .....	7446	8279	8762	6185	7167

## CHAPTER VI. NUMERALS, PRONOUNS, ADVERBS, AND PARTICLES. §§ 430-459.

§ 430. These parts of speech, although they belong to vocabulary, have affinity to the flexional part of the language, for their use is of a formal character, and largely independent of the subject-matter of any particular book. It seems therefore right to treat of them, as is usual, as a part of Grammar.

### A. Numerals and Pronouns.

§ 431. The only numeral that calls for attention is *éka*, for which see § 296.

§ 432. We have already noticed (§ 277) the great increase in the use of the pronoun of the first person singular in the later Vedic periods: and have attributed it to the increasingly personal character of the hymns, and to the introduction of dramatic episodes. But even in the AV. the pronoun of the second person is more common.<sup>1</sup>

§ 433. Of the demonstrative pronouns, *syú tyá* is early: *etád* is late in most of its forms. For the nom. sing. *esú*, *esáh* see above § 281: the nom. ace. dual m. *etí*, n. *eté*, nom. ace. pl. m. *eté*, *etíñ*, neut. *etí*, *etíñi*, may also have been established early: the remaining masc. and neuter forms and the whole of the feminine, appear to be late. Late are also *ena* and *adás*<sup>2</sup>: *tva* 'any' belongs to B.

§ 434. *Sárva*, with the meaning 'all' is late, and may be included here: as also *bahú* 'mine' with its compounds.

§ 435. The derived forms *katará*, *katamá* are late: still more so *yatará*, *yatamá*, and *itará*: *anyatará* does not occur.

§ 436. Comparatives and superlatives of prepositions are markedly more common in the later periods: *úpara* and *upamá* alone seem proper to the earlier time: *ántara* *ántama* may be added, if the derivative *antárikṣa*, which is more common late, is put out of account: *vitarám* belongs to B, and C.

<sup>1</sup> See Table, § 437.

<sup>2</sup> But see above § 284.

## § 437. Table of pronouns.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
432	<i>ahéin</i> singular <sup>1</sup>	202	76	197	273	115	84	760	968
	<i>twin</i> "	1482	550	676	1220	100	152	1151	1493
433	<i>syd, tyd</i>	112	38	44	82	4	8	2	9
	<i>etid</i> : nom. acc. m. n. dual and plural	33	18	18	36	16	5	13	34
	acc. mase. <i>etim</i>	17	6	3	0	5	1	37	43
	n. a. neut. <i>etid</i> (includ- ing adverb)	6	0	4	10	13	3	57	73
	other forms mase. and neut.	2	—	1	1	2	2	13	17
	feminine forms	16	10	15	25	7	11	60	78
	<i>ena</i>	22	14	16	33	15	20	202	237
	<i>adds</i> ( <i>asaú, amu-</i> etc.)	11	6	12	18	6	14	137	160
	<i>tva</i> 'any'	1	—	14	14	2	—	2	4
434	<i>sdrau</i> 'all'	7	3	5	8	7	18	447	472
	<i>bahú</i> 'much'	4	7	6	18	13	6	35	54
435	<i>katard, katamád</i>	5	1	6	7	3	2	17	22
	<i>yatard, yatamád</i>	0	—	—	0	—	3	20	23
	<i>itara</i>	1	—	—	6	—	3	12	15
430	<i>úpara, upamád</i>	23	12	10	31	5	1	5	11
	<i>adhabra, adhamád</i>	4	—	16	10	5	0	57	71
	<i>antara, ántama</i>	16	1	9	10	4	1	3	8
	<i>antilriká</i>	28	11	43	54	12	10	130	152
	<i>dpara, apamád</i>	8	3	15	18	2	3	30	35
	<i>avara, avamád</i>	16	8	14	22	12	2	18	32
	<i>últara, ultamád</i>	27	1	22	23	17	15	96	128
	<i>paramád</i>	15	18	26	44	12	4	59	75
	<i>parátarám</i>	0	—	—	0	3	—	—	3
	<i>praturám</i>	0	2	12	14	1	2	10	13
	<i>prathamád</i>	30	42	67	100	29	13	82	124
	<i>vitarám</i>	0	2	4	0	2	—	—	2
	<i>sahtrám</i>	6	—	—	6	—	—	1	1

## B. Case-forms used as adverbs.

§ 438. There is no definite line to be drawn between idiomatic uses of case-forms, and adverbs. In order to avoid questions of criticism, those words will be here treated as adverbs which are so recorded in the respective *indices verborum*<sup>2</sup>.

§ 439. Accusatives as adverbs. Several adverbs retain the pro-nominal ending *-d*: of these *kád* is peculiar to RV.: of its correlatives, *kám* is stable, *kam* perhaps declining: *íd*, *kuvid*, *cíd*, *smád* are all declining: but *svid* is increasing in importance, as are *céd* and *néd*.

Many adverbs resemble the aconsativo neuter in *-ah -ih -uh*: with them may be grouped those in *-ar, -ur*. Of these *aváh*, *mitháh*, *gváh*, *múhur*, *sasvár* shew no important change: *addáh*, *adháh*,

<sup>1</sup> *Ahám* is not included in the tabulated groups in the Introduction, for the reasons given in § 432.

<sup>2</sup> To this a few exceptions are made: e. g. *dürám*, *düré*, *dürdt* are treated as adverbs.

<sup>3</sup> The expanded form *sumád* is rather later than *smád*.

*parāh* and *pūnar* are more common late: *āvih* is proper to B, and *bahih* first occurs in AV.

There are several adverbs in -am: *thyam* 'quickly' is early, as is also *nānām* 'now,' which goes almost entirely out of use in AV., but reappears as an asseverative particle in the Brāhmaṇas: *dūrām* 'to a distance' *sāyām* 'at evening' are late. Others are of less importance.

*Ānuṣāk* and the rare *āyuṣāk* are early: so too *r̥dhak*: *p̥thak* is late.

Whether forms in -im belong here is more than doubtful. *dkim*, *nākim*, *mākim* are found occasionally in A and B: *īm* and *s̥im* are both<sup>1</sup> most common in B: *tūṣpim* occurs only once (in C.). For words in -ānim see below § 450.<sup>2</sup>

§ 440. Instrumentals as adverbs. Amongst forms in -ā we have the old words *tmānā*, *sācā*, as well as *gūhā*, which remains in use. In *dvitī*, *bāhūtā* we seem to have the beginnings of a new formation in -tā: these words, however, die out. Of many words referring to time and place *purī* occurs evenly in all periods, the rest show more or less growth. From the adjectives of direction we find *uccā*, *nīcā*, *pācā*, *prācā*- obliquely in B: *uccaih*, *nīcaih*, *parācaih* almost exclusively in C: with the latter group may be classified the isolated forms *cānaih* (viii. 45. 11; 80. 3) *canakaih* (viii. 80. 3 bis). Further we have a group of words denoting sounds, of which *kikirī* is the most distinctive and *svādhā* (if it is rightly grouped with the others) the most frequent: these belong to period C.

Many of the forms included above (§ 146) amongst 'homophonous instrumentals' may equally well be considered as adverbs.

The forms *endā*, *ayit* may be considered as transition forms to the fuller instrumental endings: they have been discussed above, § 284. Adverbs in -ena are not found in the Vedio period: there are a few in -ayā,<sup>3</sup> which die out. Nor do the parallel feminine forms in -iyā, -yā, -uyā attain importance at any time.<sup>4</sup>

List of words: (i.) in ā: (a) adverbs of manner: *gūhā* 53 AV. 13, *tmānā* 60 AV. 1, *vinīt* AV. 1 (?), *sācā* 86; *dvitī* 29, *bāhūtā* (?) 2: (b) of place *amā* 13 (including compounds) AV. 15, *antarī* 8 (including compounds) AV. 20, *apākti*, *pārī* 68 AV. 107: (c) of time *anāt* 5, *sānāt* 4 (including compound) AV. 2, *divā* 25 AV. 15, *ndnāt* 17 AV. 5, *purī* (with compounds, but not including *purānā*, etc.) 69 AV. 30; *uccā* 15 AV. 1, *nīcā* 7 AV. 1, *pācāt* 8 AV. 3, *prācāt* 4: (d) of sounds *kikirī* 2, *cīced* 1, *maṣmaṣāt* AV. 1, *svādhā* and compounds 23 AV. 75. (ii.) in -aih: *uccaih* 1 AV. 5, *nīcaih* AV. 7, *parācaih* 6 AV. 5, *prācaih*, *cānaih* 2, *canakaih*. (iii.) in -ayā: *adatrayāt*, *āsrayāt* 2, *rtayāt*, *kāyāt* 3, *kuhayāt*, *nak-tayāt*, *svapnayāt* AV. 1. (iv.) in -iyā, -yā: *urviyāt* 23 AV. 2, *tmānyāt* 2, *vīgyyāt*. (v.) in -uyā: see Lanman, p. 408, and § 181 sup.

<sup>1</sup> Once *sānuṣāk*.

<sup>2</sup> The uses of these words as pronouns (acc. to Grassmann) are included in the Table.

<sup>3</sup> See Table, § 444.

<sup>4</sup> Some of these may be homophonous instrumentals from stems in -ayā.

§ 441. Ablatives as adverbs. These are found only with the endings *-at*, *-tāt*, the latter being added to stems ending in *-c*, to adverbs in *-s*, or to ablative forms in *-at*. The analysis of *pacēt-tāt* is uncertain. The adverbs in *-at*, *-stāt*, *-ktāt* from adjectives signifying direction, are more common late.

List of words : (i.) in *-at* (of direction): *adharat* 7 AV. 10, *apākūt*, *uttarāt* 2 AV. 12, *puyet* 17 AV. 22. (ii.) others of place in *-at*: *amit* 2, *ārāt* 15 AV. 10, *āsīt* 2, *dārāt* 18 AV. 4, *sundāt* 21. (iii.) in *-stāt* (of direction): *adhistāt*, *anāstāt* 3, *upāristāt* 1 AV. 2, *paristāt* 5 AV. 10, *puristāt* 30 AV. 23. (iv.) in *-ktāt* (of direction) : *āpāktāt*, *ādāktāt* 4, *prāktāt*. (v.) *pacytāt* 4. (vi.) in *-attāt*: *adhardattāt*, *ārattāt* 3, *utturattāt* 2, *parākāttāt*. (vii.) from pronouns : *āt* 113 AV. 18, *āt* 2, *yāt* 4 AV. 1.<sup>1</sup>

§ 442. *Sadyāt*, perhaps a genitive form, is more common<sup>1</sup> in A and B : but also classical.

§ 443. Locatives as adverbs are not easily to be distinguished from the corresponding case-forms: *āré* and *dūré* on the one hand, *rte* on the other, will illustrate this formation. As loc. pl. *maksā* may perhaps be reckoned ; it is a very early word from which an *u* stem has been formed : see above, § 207.

§ 444. Table of case-forms used as adverbs.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
Accusatives as adverbs :									
439	(i.) in <i>-d</i> : <i>kād</i> .....	5	3	4	7	2	..	..	2
	<i>kām</i> .....	23	4	9	13	8	1	13	22
	<i>kām</i> .....	8	2	6	8	1	2	1	4
	<i>td</i> .....	338	89	207	296	90	25	76	191
	<i>kuvid</i> .....	13	7	12	19	1	..	1	2
	<i>cid</i> .....	280	88	184	222	35	18	13	66
	" (with interrogatives) .....	48	12	11	23	3	8	3	9
	<i>smud</i> and compounds .....	15	1	6	7	1	..	..	1
	<i>sunmad</i> .....	2	1	6	7	1	..	1	2
	<i>svid</i> .....	9	4	9	13	6	5	13	84
	<i>cēd</i> , <i>nēd</i> .....	2	1	..	..	1	2	15	19
	(ii.) in <i>-s</i> , <i>-r</i> : <i>addh</i> .....	3	1	..	1	..	3	14	17
	<i>adhāh</i> (with <i>adhaspada</i> ) .....	1	..	8	3	1	4	9	14
	<i>parih</i> .....	11	6	7	18	11	6	82	49
	<i>pūnar</i> and compounds .....	19	7	31	38	15	81	71	117
	<i>āvih</i> .....	8	10	19	29	4	2	7	13
	<i>bahih</i> .....	0	..	..	0	..	..	14	14
	(iii.) in <i>-am</i> : <i>tāyam</i> .....	10	3	7	10	2	..	..	2
	<i>sāyām</i> .....	1	1	..	1	..	2	19	21
	<i>nānām</i> .....	65	16	18	84	7	2	2	11
	<i>dūrām</i> .....	8	1	2	8	2	2	18	20
	(iv.) without suffix : <i>ānusādk</i> (with <i>sānusādk</i> ) .....	22	5	8	18	1	..	..	1
	<i>āyusāk</i> .....	2	..	..	0	..	..	..	0
	<i>tdhak</i> .....	9	2	2	4	1	..	..	1
	<i>pīthak</i> .....	4	1	5	6	4	..	17	21
	(v.) in <i>tm</i> : <i>ākim</i> , etc. .....	2	..	3	..	..	..	..	0
	<i>tm</i> .....	82	44	88	112	17	2	1	20
	<i>sim</i> .....	18	10	28	83	3	..	1	4

<sup>1</sup> See Table, § 444.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C	
440	Instrumentals as adverbs : in -ā : <i>gīhā</i> ..... <i>tmīnā</i> ..... <i>sicā</i> ..... <i>dvītī</i> , <i>bāhūtā</i> ..... <i>amā</i> , <i>antāvā</i> , <i>apākā</i> ..... <i>pirā</i> ..... <i>anā</i> , <i>śinā</i> ..... <i>dīvā</i> ..... <i>nānā</i> ..... <i>uccā</i> , <i>nīcā</i> , <i>pucēā</i> , <i>prācā</i> - uccalī, etc..... <i>kikirī</i> , etc..... words in -ayā..... <i>urviyā</i> , <i>tmīnyā</i> , <i>vīgvāyā</i> .....	17 35 57 20 6 21 2 12 5 8 2 6 12 5 8 2 6 2 6 2	11 7 10 8 3 10 2 4 2 5 1 3 4 2 7 14	20 16 10 3 6 18 3 2 6 8 3 5 3 8 20 4 8 3 14	31 28 26 11 9 28 5 5 8 8 4 5 8 21 21 5 15 20 4 3 14	3 2 3 11 4 13 2 2 5 3 4 1 5 1 1 5 1	2 -- -- -- 3 6 2 2 3 8 3 1 2 2 1 1 1 2	18 1 3 -- 0 35 107 126 2 4 15 20 5 0 5 12 17 22 76 82 1 1 2	18	
441	Ablatives as adverbs : <i>adharāt</i> , etc..... <i>amāt</i> , etc..... <i>adhistāt</i> , etc..... <i>apaktāt</i> , etc..... <i>pacitāt</i> ..... <i>adharāttāt</i> , etc..... <i>āt</i> , <i>tāt</i> , <i>yāt</i> .....	10 22 8 1 1 4 40	2 11 2 -- -- 2 17	3 14 17 0 2 2 33	5 25 10 8 2 2 50	4 11 7 5 2 1 17	8 1 8 5 1 1 19	44 14 35 5 1 1 19	56 28 48 5 1 1 36	
442	Genitive as adverb : <i>sadyāt<sup>1</sup></i> .....	33	10	26	30	4	..	10	14	
448	Locatives as adverbs : <i>drē</i> , <i>dürē</i> ..... <i>rte</i> ..... <i>maksā</i> .....	21 5 25	5 1 7	19 2 7	24 3 7	4 1 --	5 .. --	8 2 --	17 8 0	

## C. Adverbs with suffixes other than those of the cases.

§ 445. This is the most important class of adverbs. The words will be discussed in the order adopted in Whitney's *Grammar*.

§ 446. The ending -tāh is added (i.) to pronouns, and to nouns and adjectives so as to indicate generally direction; (ii.) to the names of parts of the body; (iii.) to other nouns. The first class is the most important: *ātāh*, *āntitāh* and *vīgvātāh* alone are early, all other words are more common late. The second class is found in period C: the third is everywhere rare.

List of words: (i.) *agratāh* 1 AV. 2, *ātāh* 56 AV. 6, *antatāh* AV. 1, *āntitāh* 6, *anyātāh* 1 AV. 2, *apāktāh* AV. 1, *amrūtāh* 3 AV. 9, *abhitāh* 25 AV. 9, *avārātāh*, *itāh* 28 AV. 71, *uttaratāh* AV. 2, *udaktāh* AV. 2, *ubhayātāh* 2, *kātāh* 11 AV. 14, *caramātāh* AV. 1, *tātāh* 22 AV. 46, *dakṣinātāh* 7 AV. 7, *dāratāh* AV. 1, *paritāh* AV. 1, *prāktāh* AV. 1, *madhyātāh* 3 AV. 11, *yātāh*

<sup>1</sup> *Sadyāt*, being in use in classical Sanskrit, is not included in the groups of the Introduction.

24 AV. 15, *vigvátaḥ* 68 AV. 22, *samānátah*, *sarvátaḥ* 2 AV. 14, *savyatáḥ*: in all, RV. 262, AV. 238. (ii.) *ásyatáḥ* AV. 2, *karnatáḥ* AV. 1, *paitih*, *pattatáḥ* AV. 1, *patsutáḥ*, *mukhatáḥ* 1 AV. 1, *gírsatáḥ* 1 AV. 2, *hṛttáḥ*: in all, RV. 5, AV. 7. (iii.) *abhi-patáḥ*, *itátah*, *r̥bhutáḥ*, *jyeṣhatáḥ* AV. 1, *bhadratáḥ* AV. 1, *mat-táḥ* AV. 1, *mangutáḥ* AV. 1, *maryatáḥ*, *samudratáḥ* AV. 1, *śindutáḥ* AV. 1: in all, RV. 4, AV. 6. The whole number of occurrences is therefore in RV. 271, in AV. 251.<sup>1</sup>

§ 447. The ending *-tra*, *-trā* is established in RV. ia *útra*, *yátra*. The only other words used with any frequency are *tútra*, and *anyátra*; all are more common late. On the other hand *-trā* is a decaying ending, and especially so in the word *satrā* and its compounds.

List of words: (i.) *átra* 119 AV. 35, *anyátra* 3 AV. 13, *amútra* AV. 4, *ubhayátra*, *tátra* 23 AV. 49, *yátra* 123 AV. 51, *vig-vátra*. (ii.) *akútrā*, *asmatrā* 8, *kútrā* 3, *dakṣinatrā*, *devatrā* 22 AV. 2, *pákatrā* 2, *purutrā* 28 AV. 2, *purusatrā* 2, *bahutrā*, *martyatrā* 5, *gavutrā* 2, *satrā* (with its compounds) 54 AV. 2.<sup>1</sup>

§ 448. Of adverbs in *-ha* with local meaning *ihā* shews a decided increase in C: *kúha*, *vigváha* shew little change. Of other adverbs in *-ha*, *suhā* shews a great increase.<sup>1</sup>

§ 449. The only adverb in *-thā*, *-tha* is *áthā*: this is rightly described by Grassmann as late: in period C it is usually accompanied by *u*. Of other adverbs in *-thā*, *itthā*, *kathā*, *yathā* (unaccented), and *víthā* are early: but *r̥nithā*, *táthā*, and *yáthā* are more common late: the words less often used *anyáthā*, *imáthā*, *ürdhváthā*, *eváthā*, *námáthā*, *púrváthā*, *pratnáthā*, *vigváthā* hardly occur after B. The formation in *-thā* must therefore be regarded as on the whole decadent.<sup>1</sup>

§ 450. Adverbs of time in *-dā* are irregular: *idā* *sádā* belong to period A: *kadā* *yadī* to all periods: *tudā* *sarvudā* are found in AV. only, replacing the two early words. *Súdam* is used in all the Vedic periods.

Forms in *-ánūm* (*idánūm*, *tadánūm*, *vigvadánūm*) are late.

Of forms in *-rhi* *kárhi* occurs 5 times in RV., of which three are in A: but *tárhi* only in C, and AV., whilst other adverbs are later than AV.

*Yádi* 'if' is more common in C, probably for reasons of idiom.<sup>1</sup>

§ 451. Of adverbs in *-dhā* none are very common; they are found in all periods. *ádhā* (*adhā*) is a decaying form: but more especially so in its use with other particles, which is not found after period B. *addhā* 'in trntb' is found in all periods.<sup>1</sup>

§ 452. Adverbs in *-gáh* are much more common in C than earlier.<sup>1</sup>

§ 453. The suffix *-vát* 'like' is not peculiar to Vedic Sanskrit (Whitney, Gr. § 1107): but within the Veda it is most common<sup>1</sup> in A.

§ 454. Table of adverbs with suffixes other than those of the cases.

<sup>1</sup> See Table, § 454.

Refer to §		A	B <sub>1</sub>	B <sub>2</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
	Adverbs in <i>-tah</i> .								
446	(i.) Older words : <i>dtah</i> .....	22	8	16	24	6	4	6	16
	<i>antitah</i> .....	1	2	1	3	2	..	..	2
	<i>viceditah</i> .....	24	9	22	31	5	8	22	35
	Later words : <i>abhitah</i> .....	3	6	10	16	4	2	9	15
	<i>ttih</i> .....	9	3	3	6	2	11	71	84
	<i>kutah</i> .....	5	..	3	3	1	2	14	17
	<i>tatih</i> .....	6	1	..	1	6	9	46	61
	<i>daksinatih</i> .....	1	..	2	2	3	1	7	11
	<i>yitah</i> .....	8	3	7	10	3	8	15	21
	Other words .....	3	2	5	7	2	8	48	53
	(ii.) <i>āyatih</i> , etc. ....	1	..	1	1	3	..	7	10
	(iii.) <i>abhipatih</i> , etc. ....	1	..	1	1	2	..	6	8
	All in <i>-tah</i> .....	84	34	71	105	39	43	251	388
447	Adverbs in <i>-tra</i> , <i>-trā</i> : <i>ātra</i> .....	31	15	41	50	21	11	35	67
	<i>anydtra</i> .....	2	..	..	0	1	..	18	14
	<i>tātra</i> .....	8	3	7	10	1	9	49	59
	<i>yatra</i> .....	23	19	31	50	21	27	51	99
	Other words .....	1	..	1	1	..	..	4	4
	All in <i>-tra</i> .....	62	37	80	117	44	47	152	243
	Words in <i>-tri</i> .....	37	7	19	26	8	4	4	16
	<i>satrā</i> and compds .....	36	10	8	18	..	..	2	2
448	Adverbs in <i>-ha</i>								
	(i.) local : <i>thai</i> .....	97	33	73	186	33	26	200	259
	<i>kūha</i> .....	5	1	3	4	2	1	3	6
	<i>vigvihā</i> .....	4	2	8	10	3	..	7	10
	(ii.) others : <i>aha</i> .....	23	9	14	23	6	1	7	14
	<i>samaha</i> .....	1	..	2	2	..	..	2	2
	<i>ha</i> .....	69	28	59	87	16	6	52	68
	<i>sahihā</i> and compounds	14	7	17	24	5	17	118	140
449	<i>ātha</i> .....	25	19	32	51	16	9	48	73
	<i>ātha u.</i> .....	3	1	5	6	7	16	118	141
	Adverbs in <i>-thā</i> : <i>āthā</i> .....	44	7	12	19	2	2	4	8
	<i>kathā</i> .....	7	10	5	15	2	1	1	4
	<i>yathā</i> (unaccented) .....	23	1	7	8	..	8	8	6
	<i>vīthā</i> .....	19	2	8	5	1	..	..	1
	<i>anyāthā</i> , etc. ....	9	9	7	10	..	..	1	1
	All the above .....	102	29	84	63	5	0	9	20
	<i>ṛtuthā</i> .....	2	3	5	8	5	3	1	9
	<i>lāthā</i> .....	7	..	2	2	2	8	86	41
	<i>yūthā</i> .....	113	31	44	75	15	28	181	224
450	<i>-dā</i> : <i>idā</i> .....	11	..	1	1	..	..	..	0
	<i>siddā</i> and compounds .....	42	5	10	15	..	..	8	8
	<i>-dānīm</i> .....	1	1	4	5	1	2	4	7
	<i>-di</i> : <i>yādi</i> .....	33	14	13	27	4	16	53	69
451	<i>-dhd</i> , <i>-dha</i> : <i>ddha</i> .....	77	18	37	55	10	5	16	31
	" with other par- ticles .....	80	4	11	15	..	..	..	0
452	<i>-gdh</i> .....	6	..	6	6	6	..	14	20
453	<i>-vāt</i> .....	41	11	15	26	..	1	3	4

## D. Particles without suffix.

§ 455. *Sú* as an independent word is fairly common in period A, then rapidly becomes rarer.

§ 456. Asseverative particles are particularly common in the earliest parts of the Rigveda: to the early words already discussed, viz. *ādha*, *ītthā*, *id*, *dvitī* may now be added *gha*, *tū*, *sma*. On the other hand *aṅgā* occurs in all parts, *kīla* more often late: but these latter words are comparatively unimportant. In all periods *u*, *hū* are very common.<sup>1</sup>

§ 457. *Nū* used in comparisons is extremely common in A and B, much rarer in C: in C it almost disappears. In classical Sanskrit it is wanting: in later books it again comes into use<sup>2</sup>. Its correlative *īva* is common in all periods<sup>3</sup>: but the words *va*, *vā*, *evā*, *evām* are all late. *Iti* is also much more common in the later hymns.

§ 458. Of words used as prepositions also the most noticeable are *ācha*, which is early, and *api* which is more common late. The latter in classical Sanskrit is chiefly used as a conjunction, though this is seldom the case in RV. or AV.

## § 459. Table of particles without suffix.

Refer to §		A	a <sub>1</sub>	B <sub>1</sub>	B	C <sub>1</sub>	C <sub>2</sub>	AV	C
455	<i>sú</i> .....	120	23	53	76	24	6	14	44
456	<i>aṅgā</i> .....	15	7	6	16	4	3	8	15
	<i>gha</i> .....	40	7	15	22	16	..	3	13
	<i>tū</i> .....	34	11	3	14	2	..	2	4
	<i>sma</i> .....	62	11	21	32	7	6	13	26
	<i>kīla</i> .....	6	..	4	4	4	2	9	
457	<i>nā</i> 'as' .....	628	216	321	537	33	9	18	60
	<i>va</i> (for <i>īva</i> ) .....	8	3	6	9	11	7	91	109
	<i>vāt</i> .....	8	2	6	7	5	6	112	123
	<i>evā</i> .....	41	34	42	76	16	17	287	270
	<i>evām</i> .....	0	..	..	0	..	1	66	67
	<i>iti</i> .....	16	7	11	18	9	9	85	103
458	<i>ācha</i> .....	52	28	24	47	5	1	14	26
	<i>api</i> , prep. .....	30	8	25	33	19	12	65	96
	" adverb .....	8	1	8	4	1	2	12	15

<sup>1</sup> See Table, § 459.

<sup>2</sup> Böhtlingk, *Wörterbuch* sub voce. The attempt to connect *nd* 'like' with *na* 'not' is quite contrary to all probabilities: but there seem to be traces of an asseverative particle *nd* 'truly,' which is closely connected with *nā* 'like.' If we compare a greedy boy to a pig we do not say "no, he is not (exactly) a pig," but "yes he is a pig."

<sup>3</sup> A complete list of occurrences does not seem to be available.

## CONCLUSION.

§ 460. In the preceding pages the attempt has been made to give by the aid of figures a fairly complete picture of the changes in Sanskrit phonology and accidents which can be traced in the Vedic period, and thus to indicate the lines upon which an historical Vedic Grammar may some day be written. It remains to consider whether the picture thus drawn is consistent with historical probability, and tends to confirm the theory of literary epochs in the Veda upon which it depends: and further what the principal features of the picture itself are.

§ 461. To the evidence summarized in § 41, which is based upon the number of occurrences of the most important 'early' and 'late variations,' it is now desirable to add the further evidence which may be based upon the number of variations alone, and to extend their definition so as to include changes of a much more gradual kind. The amount of matter in AB is about double that in C: and if a variation occurs 20 times in AB, or 10 times in C, and in either case half as often again as the amount of matter accounts for, we have so far a reasonable presumption that the variation is historically 'early' or 'late.' For this purpose, then, let 'early variations' be those which occur at least 20 times in AB, being 3 times as often as in C: and 'late variations' those which occur at least 10 times in C, being three-fourths as often as in AB.

§ 462. This wider definition frees us from the objection urged to our former argument, that a late poem may have been decked out by the repeated introduction of metrical and formal archaisms, so as to appear at first glance of a much earlier date. For unless this artifice approached the standard of high scholarly art, it would be at once detected by disregarding the number of occurrences, and considering only if early variations numerous in kind are present, and (still more particularly) if late variations are absent. This test should accordingly be applied to the main presupposition of this article, namely, that the hymns included in A are on the whole earlier than those included in B.

§ 463. It may, however, be urged that we now run an opposite risk, and that by our new and more lax definition there will be included a number of so-called variations that are based upon a few occurrences really attributable to chance: and that therefore each 'variation' should be examined on its own individual merits, and in accordance with established literary canons. Such a scrutiny I believe not to be practicable or desirable for the present purpose: first because it is in a very high degree improbable that chance will at all materially affect the relative value of the respective figures, it being of the disposition of that deity to dis-

tribute favours impartially to both sides ; but principally because the literary canons appealed to are in the main the prepossessions of each individual writer, and are far more likely to mislead than to aid. But though in this respect I look upon the detailed 'weighing' of evidence as a mistake, any one who makes the experiment will soon convince himself that it will not affect appreciably the results, always provided that the whole range of evidence is not unduly narrowed.

§ 464. In the tables included in this article about 600 distinct variations are examined numerically, and it seems unlikely that any great number have been neglected. Of these, 257 satisfy our present definition of 'early variations,' and 233 have the same title to be considered late. Each variation may be considered to be more prevalent in A or in B if it has in either period a greater number of occurrences by one-fourth than in the other.

	Early	Late
More common in A	106	32
Equally common	105	55
More common in B	46	146
	257	233

scores of archaisms, but also to the careful exclusion of from fifty to one hundred neoterisms : although the respective archaisms and neoterisms are to a large extent such as could only have been reeognised by careful study.

§ 465. But these figures are not given only as evidence, but also to shew the proportion between the main current of change and the eddies. For it appears that whilst B and C agree as to 252 variations, yet A and C agree in as many as 78 : whilst in 160 neither A nor B is appreciably nearer to C. In other words, of every 100 changes taking place from B to C, we find 52 only progressing between A and B, whilst in 16 cases the change is then in the opposite direction. This 16 per cent. represents, it would seem, the failures of literary development : changes or variations which attained at one time to considerable vogue, but were yet destined to disappear or be reversed in the succeeding epoch. Similarly 52 per cent. represents the proportion of progressive ohange : and the remainder (32 per cent.) the new creations of the later period. But many variations, though not destined to survive, are in themselves of great beauty and importance, and as such are discussed in the body of this article : such are the instr. pl. in *-ebhīh*, the unaugmented past tenses, the 1st pers. pl. ending in *-masi*, and the use of the verbal infixes *-nū*, *-ni*, *-nu*. I fail however to observe any general characteristic which would be a reason for ascribing to the hymns of any intermediate period a special dialectic or literary character.

By this test the variations are distributed as shewn at the side. The 'early variations' prevalent in A are twice as many as in B : but 'late variations' are only one-fifth as many. If therefore there is artifice in the apparently early character of A, it extends not only to the introduction of some

§ 466. I would now return to consider the main stream of change, and call attention to one or two of the most important currents of which it is composed. The first may be named "Syllabic contraction": it has been generally recognised, and has now been shewn to mark more particularly the first period of the Rigveda. Its effect is to combine two syllables in one, either by contraction of consecutive vowels or by consonantization of the elements which may be variously written, (i.) *iy, uv, ar, an*, (ii.) *iy, uv, rr, mn*, (iii.) *i u r n*: the consonantal resultants being *y v r n* respectively.

This process, though general, proceeds more rapidly after a light syllable, and thus suggests the generalization that a heavy syllable is followed by a syllabic element: and in this way original *y v* come not rarely to be vocalized. By 'resolution' of a vowel or semi-vowel we understand generally the critical process by which the earlier forms are restored to the text: but 'resolution' occurs also from time to time in a historical sense, from causes such as that just described.

§ 467. Not less striking is the process which may be described as "Flexional expansion," which is due to efforts (which in the main I take to be conscious) to introduce distinctness into flexional elements originally slight in bulk and of multiple connotation. "Flexional expansion" is at work on a grand scale in period B, and even in C is still a very strong force: its differentiating value appears strikingly in the development of an original -*a* final into such various forms as -*au*, -*āni*, -*ena*, -*ayā*. Instances of flexional expansion are found on almost every page of this article: but the following suggestions may be referred to as being more novel than others, and with all reserves as to each particular case:

- <i>ā</i> dual to - <i>ā</i> , § 149.	- <i>mah</i> 1 pl. to - <i>masi</i> , § 317.
- <i>aih</i> instr. pl. to - <i>ebhih</i> , § 156.	- <i>tha</i> , - <i>ta</i> to - <i>thana</i> , - <i>tana</i> , § 318.
- <i>yai</i> fem. dat. to - <i>ayai</i> , § 162.	- <i>e</i> , - <i>se</i> , - <i>te</i> subj. to - <i>ai</i> , - <i>sai</i> , - <i>tai</i> , §§ 320, 321.
- <i>id</i> instr. s. to - <i>ida</i> , § 180.	- <i>s</i> , - <i>t</i> subj. to - <i>si</i> , - <i>ti</i> , § 321.
- <i>i</i> , - <i>I</i> instr. s. to - <i>id</i> , § 181.	- <i>ā</i> 1. 3 sing. pf. to - <i>au</i> , § 331.
- <i>yah</i> noun. v. pl. to - <i>ayah</i> , § 184.	infixes added:
- <i>as</i> inst. s. to - <i>asd</i> , § 245.	- <i>a</i> subjunctive, § 392.
- <i>an</i> loc. s. to - <i>ani</i> , § 249.	- <i>i</i> thematic, § 416.
- <i>ā</i> , - <i>a</i> pl. an. stems to - <i>dni</i> , § 250.	- <i>p</i> causative, § 425.
tw̄ loc. to <i>tw̄iyi</i> , § 274.	
- <i>tāt</i> suffix to - <i>tāti</i> , § 299.	

§ 468. "Flexional expansion" often comes into conflict with "syllabic contraction": it proves the stronger force, and holds its ground by the aid of infixes, such as *y r n s*: thus the instr. s. -*id* becomes in most cases -*inā* not -*yā*. The principle seems to run mad in such forms as *parēktāt*, *parākāttāt* in period C: and the gen. pl. in -*ānaam* seems to be a similar wild growth in pre-Vedic times.

§ 469. The process of class-formation, otherwise described as 'transition' or 'false analogy,' has been fully recognised by previous writers, and needs to be defined rather than illustrated. In

the noun-system it serves in the Vedic period to strengthen distinctions of gender, such as those between stems in *-a*, *-i*, *-u* (masc. neut.), and *-ā*, *-ī*, *-ū* (fem.). In the verb-system it develops from almost colourless suffixes the *-s* future, the passives, and all varieties of secondary conjugation.

§ 470. The assimilation of foreign elements appears chiefly in the growth of the letter *l*, and of the lingual series generally.

§ 471. Finally, it may not be altogether superfluous to advert to the spread of the instrumental case and the passive voice, and the morbid emphasis with which the pronoun of the first person is reiterated in the latest hymns.

### § 472. CITATIONS FROM THE RIGVEDA

(chiefly in respect of metre.)

The references are to the sections.

RV. i.	§	116. 0, 16	85	175. 4	85	N. 1, 85, 109(b)
8. 8	217	117. 18	85	177. 4		134
9. 1	820	22	107(a)	187. 1		71 N. 1
14. 8	184	110. 1	85	7		88
20. 3	80	120. 1	816 N. 2	189. 2		59
35. 8	85	2	60 N. 2, 107(n)	190. 7		85
67. 14	623		N. 1	191. 0		143(e)
88. 2	78	121. 1	150			
43. 0	89	5	100(b)			
50. 5, 5	150	122. 1	298	RV. ii.	§	
18	275	18	183	1. 10		826
54. 11	152	15	50	14		83
58. 8	99	127. 2	70 N. 0	3. 7		149
9	144(c)	7	152	4. 1		83
01. 9	202	10	212 N. 2	3		88
14	08	128. 7	70 N. 0	5		85
63. 5	143(g), 154	120. 5	70	0. 5		256
64. 15	00	8	87, 156	8. 1		159
09. 1	831	0	210	11. 2	143(f), 156	
70. 3	159	10	80, 219	8	71 N. 1	
71. 2	217	130. 3	70	13. 1		89
3	159	134. 2	87	15. 7		85
8	222	185. 4	107(b)	17. 5		109(b)
9	69	138. 4	65	6		87
77. 1	144(d)	141. 12	185, 143(h)	18. 6		82 N. 3
2	70, 143(g)	149. 3	69	19. 7		88
3	69, 143(h)	150. 1	85	20. 8		164
85. 9	144(d)	155. 1	298	23. 7		143(g)
88. 8	89	157. 3	85	12		159
94. 12	59	158. 1	94 N. 2, 100(b)	24. 5		80 N. 6
100. 5	85	161. 8	184, 323	28. 6		86
18	85, 107(b)	102. 19	85			
17	85	20	61	RV. iii.	§	
104. 1	192	165. 0	166	13. 1		72
110. 4	862	15	153	14. 4		159
0	89	188. 5	85	20. 1		88
112. 19	205	173. 3	161	21. 5		320
116. 2	85	8	09	27. 2		255
0	162	12	70 N. 0	27. 2		184
114. 3	85	174. 0	826	80. 21		

<i>RV. iii.—continued.</i>	<i>§</i>	<i>RV. vi.</i>	<i>§</i>	<i>41.</i>	<i>6</i>	<i>134</i>
31. 2	85	4. 4	326	44.	4	144(d)
31. 13	356	8	70	46.	1	70
38. 5	83	9. 2, 3	360 N. 8	2, 4	107(b) N. 2	
49. 1	76	16. 7	76	56.	4	61
53. 20	356 N. 3	11. 3	139	58.	2	237
59. 2	184	12. 5	85	56.	6	323
		14. 3	86	60.	9	154
		15. 8	143(g)	62.	6	69
<i>RV. iv.</i>	<i>§</i>	17. 7	134	66.	2	76
2. 3	156	12	71 N. 1		8	134
8	85	18. 7	254	68.	8	81
11, 15	159	20. 7	107(b), 109(b)	75.	4	160
16	265	11	85	86.	4	134
6. 18	86	21. 6, 8	68	93.	3	85
4. 14	88	24. 3	143(h)	63.	8	181
16. 1	88	7	71 N. 1, 143(f)		6	69
16. 21	89	29. 8	78	99.	3	143(e)
26. 1	89	7	167(b) N. 2	166.	1	69, 143(g)
21. 6	65	30. 4	83			
26. 7	154	37. 2, 3	88			
28. 3	88	44. 8	152			
36. 9	161	46. 11	250			
26	88	47. 2	109(b)	1. 20		164
84. 6	134	16	159	66		88
37. 4	152	17	68	2. 36	143(f), 155	
38. 1	318	48. 17	76	41		72
42. 1	167(b)	50. 2	144(c)	4. 19		86
43. 4	69	16	88	5. 35		85
45. 2, 8	88	51. 2	69, 159	87		68
48. 1	86	68. 1	149	8. 36		89
55. 6	167(a)	8	169(a), 144(b)	7. 83		89
56. 8	322	7	85, 152	11. 7		172
		65. 2	148(h)	18. 13		85
		6	71	19. 87		76
		66. 5	72	25. 14		85
<i>RV. v.</i>	<i>§</i>	67. 8	149	18		147
4. 7	148(f), 158	9	168	26. 19		256
7. 16	159	16	152	29. 2		88
16. 6	86	68. 5	76 N. 8	61. 2		72
18. 5	89	7	167(b)	16		82
17. 5	66	8	69	34. 12		85
86. 8	88			85. 19-21		85
83. 1	72			86. 7		85
6	864 N. 1			87. 7		85
41. 4, 9	152			88. 2		256
12	88	8. 9	214	88		85
44. 16	76 N. 8	4. 2	264	39. 1		87
45. 9	185	6	143(g)	45. 36, 37		361
49. 3	217	7. 7	69 N. 6	46. 6		256
56. 2	76	8. 1	86	16		76
62. 1	135	15. 14	69	26		154
14	164	18. 17	65	47. 18		8
15	69	19. 5	134			
53. 14	87 N. 3, 217	21. 8	86			
56. 2	72	25. 2	143(g)	2. 5		88
61. 2	78	34. 7	143(e)	4. 4		71 N. 1
5	65	35. 14	152	5. 8		262
64. 6	88	37. 4	85	8. 4		159
74. 6	69	46. 2	76	9. 4		86
80. 5	88	6	153			

Valakhilya.

RV. viii.—continued.	\$	RV. ix.	\$	74. 1	316
52. 3	320 N. 5	1. 2	159	76. 1	108
54. 4	256	6	326	78. 6	152
58. 7	86	8. 4	86	79. 3	107(a)
60. 4	85	6. 3	89	83. 6	177
7	143(g)	5	167(c), 217	85. 25	85
10	83	7	254	34	88 N. 9
61. 7	161	14. 10, 11	83	46	213
10	256	20. 2	134	86. 4	83
64. 8	153	3	264	16. 17	134
65. 7	85	22. 1	316	87. 15	134
12	81	3	83	88. 1	298
81. 7	232	5	87	90. 4	134
8	256	6	172	93. 2	154
90. 10	156	23. 3	72	9	320 N. 5
92. 13	166	24. 2	143(f), 156	10	134
		5	83	15	85
		26. 1	83, 154	94. 11	152
		3	88	95. 8	316
RV. ix.	\$	27. 15	149, 273	18	167(a)
9. 4	81 N. 1	28. 11	166	67. 22	254
13. 6	83	30. 6	72	108. 12	85
14. 4	85	39. 1	286	105. 4	316
18. 1	63	16	85	11	72
19. 6	83	46. 8	185	168. 11	69
24. 7	86	46. 5	150	129. 6	134
61. 23	85	48. 9	69	182. 8	109(b)
78. 1	85	49. 7	820	135. 7	134
85. 4	85	50. 4	107(b), 169(b)	136. 6	85
86. 43	109(a)	5	83	138. 4	88
87. 8	85	6	107(b)	146. 3	162
88. 2	155	51. 2	81	142. 1	150
89. 3	86	4	81	144. 5	134
94. 5	85	5	826	148. 4	89 N. 8, 144(c), 216
96. 21	81	9	194		
98. 2	83	53. 4	108	151. 4	82
101. 12	152	5	152	158. 1	172
108. 18	219	59. 6	78 N. 1	2	134
109. 20	86	61. 4	76	162. 1, 2	160
111. 1	60	11	109(b)	163. 4	89
113. 2	85	18	143(g)	169. 2	82
		64. 14	159	180. 1	820
		72. 8	88		

## ERRATA.

p. 213 l. 12. In the third column on the left-hand side insert '8'.

p. 248 l. 10. Add 'pupūriāb v. 8. 9'.

p. 249 l. 18. Insert '887. 6'.

l. 18. Omit '887. 6'.

p. 251 l. 3 from bottom. In the first column for '2' read '8'.

p. 260 l. 18. For '447' read '457'.

p. 270 l. 20. After 'nom.' insert 'voc.'

p. 313 l. 14 from bottom. In the column headed 'C' for '6' read '3'.

p. 340 l. 13. For '113' read '101'.



TABLE SHEWING THE PROVISIONAL ASSIGNMENT OF THE RESPECTIVE HYMNS  
OF THE RIGVEDA TO FIVE LITERARY EPOCHS, ACCORDING  
TO KZ. XXXIV. (N. F. XIV.) PP. 207-344.

**EXPLANATIONS.**—The figures in the left-hand column for books ii.-x. are those used in Grassmann's *Wörterbuch*. The figures in brackets for viii. 49-92 are those shewn in Aufrecht's second edition of his *Rigveda*. The symbols A, etc., accompanying the sub-headings, denote the period to which those hymns are assigned which are not mentioned separately.

EXPLANATIONS.—The figures in the left-hand column for books ii.-x. are those used in Grassmann's Wör- terbuch. The figures in brackets for viii., 49-93 are those shewn in Aufrecht's second edition of his Rigveda. The symbols A, etc., accompanying the sub-headings, denote the period to which those hymns are assigned which are not mentioned separately.			Book iii. B1.	Book v.
1. 1-60. A.	92. 18-18	A	230-9 2-5 B2	355 1 B2
1	B3	93. 1-8	241 7 B2	356-60 2-6 B1
11	B1	4-8	242 8 C1	361 7 A
13	B2	9-12	243-7 9-13 A	362 8 B1
22	B1		250 19 A	363, 4 9, 10 A
23. 16-18	B2	i. 94-126. B2.	251, 2 17, 18 B2	365, 0 11, 12 B1
19-24	C1	115 C1	253-7 21-23 B2	367, 8 13, 14 A
24. 6-15	C1	122 A	259 25 A	369 15 B1
28. 1-6	C2	i. 127-189. A.	260 26 B2	370-2 16-18 A
20	B1	271 37	261 27 A	373 19 B1
81-85	B2	273 39	262 28 C1	374-8 20-26 A
87, 88	B1	274-6 40-42 A	293, 4 29, 30 B2	381 27 B1
43. 7-9	B2	278, 9 44, 45 B2	296 32 C2	382 28 R2
50. 10-18	C2	285 51. 1-3 A	297 33 B2	383 29 B1
i. 51-73. A.		10-12 A	298 34 B2	384-0 30-32 B2
51-54	B2	183. 1-5 C1	280 52 B2	387, 8 31, 34 B1
59	B2	184. 1-5 C1	287 53. 1-19 B2	390, 1 30, 37 B2
02	B1	185. 1-5 C1	288-01 54-57 B2	392, 3 38, 39 A
04	B1	186. 1-5 C1	203 59. 6-0 A	394 40. 1-4 B1
66, 67	B1	187. 1-5 C1	294 60 B2	395 5-9 C2
71-78	B2	188. 1-5 C1	296 62. 4-18 A	396, 7 42, 48 B1
i. 74-93.				398 44. 1-13 B1
74, 75	A	297 58. 1-24 C2		400, 1 45 B1
79, 77	B1	303 59. 6-0 A		402, 3 46, 7 B2
78	B2	304 60 B2		404 47 B1
79. 1-3	B1	305 61. 1-10 A		405 51. 1-10 A
4-12	A	306 62. 4-18 A		406 52 A
80-83	B1			407 53 B1
84. 1-9	A	307, 8 11, 12 B2		408, 9 54, 55 B2
10-12	B1	309 13 C1		410, 1 56, 57 B1
18-15	A	310 14 B2		412-4 58-00 B2
16-18	B2	311 15 C1		413 59 A
19, 29	A	312 16 B2		414 60 C1
85	B2	313 17 B2		415 51. 1-4 A
86	A	314 18 B2		416 52-10 B2
87	B1	315 19 B2		417 53 B1
88	A	316 20 B2		418-22 54-68 A
89	B2	317 21 B2		423 55 B1
90	A	318 22 B2		424-8 70-74 A
91. 1-17	B2	319 23 B2		429-31 75-77 B1
18-23	C1	320 24 B2		432 78. 1-3 A
02. 1-4	B1	321 25 B2		433 4-9 C2
5-12	B2	322 26 B2		434-6 80-82 B2
		323 27 B2		435 83 C1
		324 28 B2		436 84, 85 B2
		325 29 B2		440, 1 86, 87 A

TABLE SHEWING THE PROVISIONAL ASSIGNMENT OF THE RESPECTIVE HYMNS  
OF THE RIGVEDA TO FIVE LITERARY EPOCHS, ACCORDING  
TO KZ. XXXIV. (N. F. XIV.) PP. 297-344.

Book vi. A.	Book viii. A.	Book x.
442 1 B1	521 1, 33, 34 C1	x. 1-9.
446-9 5-8 B2	534 14 B2	915 89 B2
450 9 C1	640 29 B2	916 95 C2
456 15, 16-19 B2	651 81, 1-4 C1	917 91 C1
457 16, 46-48 B2	653 33, 10-19 C1	918 92 B1
458, 9 17, 18 B1	659-61 30-41 B2	919 93 A
453 22 B1	662 42, 1-3 B2	920, 1 94, 5 C1
468 27 B1	667 47, 1-13 B2	922 95 B2
469 28 C1	14-18 C2	923 97 C2
471 30 B1	558 48 B2	924 98 C1
488 47, 1-25 B2	1524, 5 V, 7, 8 B2	925 99 B1
25-28 C1	1027 V, 10 C2	926 100 B2
29-31 C2	1528 V, 11 C1	x. 10-19.
489 48, 22 C1	576 56 (67) B1	835 15 C1
490 49 B1	581 51 (72) B2	837, 8 11, 12 B2
498-9 52-58 B2	682 62 (73) B1	839-41 13-15 C1
501 60, 13-15 B1	080-8 66-68	842-5 16-19 C2
502 01, 1-8 B1	(77-79) B2	934 108 C1
19, 14 B2	089 59 (80) B1	935 109 C2
503 62 B1	700 80 (91) C1	x. 20-26. A.
505, 8 64, 65 B1	705 85 (90) B1	936-9 110-118 B2
510, 1 69, 70 B1	709 89 (100)	940 114 C2
513 72 B2	1-0 B2	941, 2 115, 116 B2
515, 0 74, 75 C2	7-12 C1	948 117 C1
	715 90 (101)	944, 5 118, 119 B2
	14-16 B2	948 125 B1
Book vii. A.	711 91 (102) B1	947 131 C3
		948-50 122-124 B2
		951 125 C1
		952 126 B2
		953 127 C1
521, 2 5, 6 B2		954-6 128-180 C2
525, 6 9, 10 B2		957-60 181-134 B2
529, 30 13, 14 B2		961-3 135-137 C2
534 18 B2	ix. 1-67. A.	964 138 C2
542 20 B1	717 5, 8-11 C2	965 139, 1-3 B2
540 33 C1	720 17 B1	966, 7 140, 141 B2
551 35 B2	779 07, 31, 32 C2	968 142 C1
557 41 B2		950, 70 143, 144 A
560 44 C1	ix. 68-07. B1.	971, 2 145, 146 C2
502, 8 40, 47 B2		973, 4 147, 148 A
555 49 B2	781 60 B2	975 149 C1
556 50 C2	782 75 A	976 150 B2
575 54 B2	785 73 B2	x. 151-191. C2.
571 55 C2	792 80 B2	979 153 B2
575 59, 7, 8 B2	795 83 B2	982 156 B2
12 C1	797 85 B2	986 165 B2
582 66, 10-10 B1	800 88 A	906-8 170-172 B2
591-3 75-77 B1	802 00 B2	1002 176 B2
594-6 78-80 B2	806 94 A	1004 178 C1
598, 0 82, 3 B2		1005, 6 179, 180 B2
605 89 B2	ix. 98-114. A.	1018-5 187-189 B2
913-6 97-150 B1		1017 191, 1 B2
817, 8 151, 102 C1	824 112 C1	
619, 20 103 104 C2	825, 6 113, 114 C2	



*The Syntax of the Assyrian Preposition ana.*--By JOHN DYNELKY PRINCE, Professor in New York University, New York, N. Y.

The most flexible particles in the Assyrian language are undoubtedly the constantly occurring prepositions *ana* and *ina*. From a single fundamental idea each has developed a great variety of meanings, encroaching in a number of instances both on each other's functions and, especially in the case of *ina*, on those of several other prepositions. The discussion of the syntax of *ina* published in JAOS. xvi. pp. cxxviii.-cxxxi. should for the sake of completeness be supplemented by a similar treatment of the various uses of *ana*.

The syntax of *ana* is not so involved as that of *ina*, because it does not depart quite so widely nor extensively from its primary meaning. The fundamental idea underlying all its meanings is, without doubt, motion towards, 'unto,' from which it is possible to trace the development of every application of the preposition. There are two modifications of the fundamental conception 'unto' expressed by *ana*, viz. the local and the temporal use.

1. The ordinary use of the *ana* of motion in the local sense is found especially with two allied classes of verbs, viz. those of going and those of bringing.

It occurs commonly with all verbs of going, such as *alāku* 'go,' I. R. Ašurn. i. 46; *ēla* 'go up,' III. R. Shalu. ii. 49, and *qardbu* 'approach,' I. R. Ašurn. i. 74. It is not unusual, however, to find verbs of going construed without any preposition, as in *illikū rigati* 'they came to my aid,' Senn. Taylor, v. 53-4; Ašurb. iv. 36.

*Ana* is naturally used after verbs conveying specifically the idea of causing to approach, e. g., bringing, sending, reaching, turning, etc. Thus, with *abālu* 'bring,' I. R. Tig. v. 62-3; with *rāgānu* 'fasten unto,' I. R. Ašurn. i. 64; with *nasū*; *ana Sanitka . . . attaši gati* 'unto S. I lifted up my hands (in prayer),' Snrg. Cyl. 54. *Ana* with *tāru* in the sense of 'adding to' undoubtedly belongs here; cf. *ana miçir Ašur utirra* 'I added it unto the limits of Assyria,' Sarg. Prunkinschr. 44. *Ana* also occurs frequently in this sense in composition with *eli*, *arku*, *birit*, *muxzu*, *mazru*,<sup>1</sup> and *girbu*.

It is hardly necessary to cite examples to show that the syntactical equivalents of *ana* in the other Semitic languages, e. g., the Heb. prep. נ (לְ), the Ethiopic *la*, and the Arabic ل, لـ are found with exactly this meaning 'unto' after verbs of motion.

<sup>1</sup> *Mazru* also occurs in composition with *ina* in the sense 'unto'; cf. JAOS. xvi. p. cxxx.

In Hebrew נְאָל is used more especially as the preposition of motion, while לְ appears generally in a dative sense, although it sometimes usurps the functions of נְאָל, as, for example, Is. ix. 4-5. In Ethiopic, however, *la*, although frequently occurring in the sense of 'unto' after verbs of motion, serves more commonly like the Hebrew לְ as a sign of the dative.<sup>1</sup> Ordinarily the preposition *xabi*, like נְאָל in Hebrew, appears after verbs of bringing or sending.<sup>2</sup>

The Assyr. *ana*, from its primary legitimate sense of 'into, toward,' with verbs of motion came to be employed occasionally, although not commonly, as the preposition of direction into, thus usurping one of the functions of *ina*;<sup>3</sup> so, *nadū ana milim*, 'to throw into the river,' IV. R. Rammannirāti rev. 18, and *erēbu ana* 'enter into,' I. R. Ašurn. i. 83. The use of *ana* with *esēru* 'enclose' probably belongs here also; *ana ištēn aši . . . lu exiršunuti* 'I shut them up within one city,' I. R. Tig. v. 77-8. This verb, however, is more generally and correctly employed with *ina*, as in I. R. Ašurn. iii. 46. The use of the Heb. נְאָל 'unto' for 'into' in Jon. i. 12: וְהַתִּלֵּנִי אֶל הַיּוֹם may be compared with *nadū ana* just quoted. The common expression בּוֹא אֶל אֲשָׁה may also have had some such underlying idea.

2. The second primary modification of *ana* is its temporal use in the sense 'until,' oneroaching on the force of *adi*.<sup>4</sup> This is illustrated by the familiar idioms *ana arkat īme*; *ana gīl īme* 'until the end of days'; *ana matēma* 'for ever,' etc. Similar expressions are very common in the narrative inscriptions; thus, *ana xi ḥandti* 'until (during) eleven years,' I. R. Esarh. ii. 17-18; *ana ištēn īma la uballitšu* 'for a single day I did not let him live,' III. R. Ašurriši 13. This latter uso is really the same as *adi* 'during,' V. R. 58, 80; *ina* 'during,' I. R. Senn. iii. 76.<sup>5</sup> *Ana* in composition with *la* in the sense of 'before,' generally expressed by some combination of *pān*, should certainly be classified under this head; *ana lu kašdī ina mātišu* 'before arriving in his land,' I. R. Tig. ii. 45. The temporal *ana* is also found in composition with *targu*, III. R. Senn. Bav. 49. This temporal use of *ana* is of course a perfectly natural development from its original signification. The Arabic إِلَى is also employed in a similar temporal sense, e. g. إِلَى يَوْمِ الْقِيَمَةِ 'until the day of resurrection.'

In addition to these modifications of the primary meaning of *ana*, there are, as in the case of *ina*, several secondary uses of

<sup>1</sup> Dillmann, *Aeth. Gram.*, pp. 307 ff.

<sup>2</sup> Dillmann, p. 310.

<sup>3</sup> JAOS. XVI. p. ccxxix.

<sup>4</sup> Also, of course, with *ina*, I. R. Ašurn. ii. 19-20; 87-8.

<sup>5</sup> Cf. *adi libbi īme*, V. R. 6, 2, etc.

<sup>6</sup> See JAOS. XVI. p. ccxxiii. *adi* and *ina* do not really coincide except in the temporal signification. The local *adi* always meant 'as far as', while the local *ana* is simply 'towards'.

<sup>7</sup> Cf. I. R. Tig. v. 91; vii. 62.

the preposition, all of which are clearly developments from the fundamental idea of motion towards. These uses may be classified as follows: 1. the *ana* of the dative; 2. the *ana* of purpose; 3. the complementary *ana*; 4. the adverbial *ana*.

1. Perhaps the most natural development of the original *ana* of motion is the use of the preposition to express the *dativo* relation, especially with verbs of giving. Thus, *ana Ramman ašruq* ‘unto R. I gave,’ I. R. Tig. ii. 61; *ana Xozakianu . . . iddindšu* ‘unto Hezekiah they gave it,’ Senn. Taylor ii. 71. It was but a step from this application of the preposition to use *ana* with the meaning ‘for the benefit of,’ and consequently we find it very generally employed as the sign of the *datus commodi*; thus, *ana puleia lišruqu* ‘may they give for my kingdom,’ I. R. Tig. viii. 28; *ona mitiq nargabatia la natu* ‘not suitable for the passage of my chariots,’ I. R. Tig. ii. 73-4. *Ana* with *gibil* ‘to speak,’ Tig. iii. 43-4, and *tukdlu* ‘to trust’; *ana Nabu natkil* ‘trust thou in Nebo,’ I. R. Rammanuirari, nr. 2. 12, is clearly a similar construction of the *datus commodi*. The use of the preposition in such phrases as *ana biblat libbia* ‘according to the desire of my heart,’ Tig. vii. 14, should of course be classified here.

The *ana* of motion towards, however, could also be employed to express hostility ‘against,’ although this significatio belongs more properly to *ina* and *eli*.<sup>1</sup> We thus find *ana* frequently used to denote the *datus incommodi* in sentences like the following: *ana galmia šuatu ilteu* ‘who plots evil against this my image,’ I. R. Ašurn. Mon. 87-8; *ana Kakme idbubu* ‘planned against the K.,’ Sarg. Cyl. 28, where the verb plainly indicates a hostile intention. The idiom *palixu ana* ‘to be afraid of,’ Ašurh. v. 96, is also a *datus incommodi*. The dative *ana* in both senses is very generally foaad in composition with other prepositions. Thus, *datus commodi* with *eli* ‘over (for),’ II. Syn. Tablet i. 12; with *pān* used of presenting an offering,’ III. R. Shalm. ii. 87; *datus incommodi* ‘against,’ Sarg. Prunkinschr. 150; with *libbu* ‘against,’ Lay. Sarg. 19; and with *targu* ‘against,’ Sarg. Prunkinschr. 49.

The frequent use of *ana* in later Babylonian, especially in the Achaemenian inscriptions, as a sign of the accusative is clearly a development of its dative application. *Ana* simply became a partiole which indicated the object upon which the action of the verb was carried out; cf. Beh. 13.<sup>2</sup> The late Hch. and Aram. use of *ל* in this sense is a precisely cognate idiom.

The use of the Hebrew *ל* as the prep. of the *dat. commodi* is of very frequent occurrence, and requires no illustration. The *dat. incommodi*, on the other hand, although sometimes expressed by *ל*, is generally denoted by *לְ*, as in Is. iii. 8, or by *לִי*, as Jnd. xvi. 12. The Arabic *لِي* also appears in what is

<sup>1</sup> Also with *ina eli*, IV. R. 61, 27 b.

<sup>2</sup> For *ina* see JAOS. xvi. p. cxxx.; and for *eli*, Sarg. Nimrud, 18.

<sup>3</sup> *Ana* alone is also used in the sense ‘offer unto,’ I. R. Tig. viii. 10.

<sup>4</sup> Cf. Bezold, *Achadm. Inschriften*, p. 49.

ليجتمعكم الى يوم القيمة 'he will collect you for the day of judgment,' but the regular preposition in Arabic for the dative is of course *لِ* which sometimes, especially after the interjection *يا*, appears as a *dat.* *incommodi:* *يا الناس للكاذب* 'O people (go) against the liar!'

2. It is not difficult to see how from a prep. denoting 'unto, towards,' was developed the idea 'unto' in the sense of 'in order that.' It is but a step from the concept 'to go to war' to the idea 'to go to wage war'; thus, *ana epeš qabli u tarazi li ibni* 'to make war and hattle they came,' Tig. iv. 86-7. The familiar expressions *ana turri ginnili* 'to avenge,' Sarg. Prunkinschr. 120; *ana šuzub napšatišu* 'to save his life,' Shalm. Obelisk 94, as well as the more idiomatic phrases *ana la qabati* 'not to be founled again,' Tig. vi. 17; *ana lu šuparke* 'not to be altered,' v. 41, and many others, all belong in this category. It is not unusual to find *ana* in this sense construed with a noun, as *ana šarruti* 'for kingship,' Sarg. Prunkinsonhr. 94; *ana valti* 'for battle against me,' Ašurb. v. 76. The ordinary occurrence of the Hebrew **ל** before the infin. as in **לְרֹאָתִי**, Gen. xi. 5, and the

Arabic *ل* in expressions like 'ho arose to bring him aid' are exactly equivalent to this use of *ana*.

3. There can be no doubt that the complementary *ana* is clearly allied syntactically with the *ana* of purpose. This is seen especially in such idioms as *ana dannatiš iškun* 'ho made it for his fortress,' e. g. in order to be his fortress, Shalm. Obelisk 47; *ana širiqti išruqani* 'they gave it as a gift,' e. g. to serve as a gift, Tig. viii. 42, etc. This is evident even in expressions like *ana tili u qarni ultr* 'I turned it into a ruin-heap and arable land,' II. R. Tig. iii. line 17, and in the frequent construction with *manū*, as *ana šallāti amnu* 'I counted them as booty,' Senn. Taylor iii. 5. Occasionally *manū* is construed without any preposition, as *qata rabu . . . ergili amnu* 'I entrusted the land to the hands of the governor,' Senn. Taylor iv. 50. This uso corresponds exactly to the Hebrew complementary **ל** in such idioms as **מִשְׁחָה אֲתָה דָר לְטַלֵּךְ**, 2 Sam. v. 3, as well as to the similar application of the Ethiopic *la*, Gen. ii. 7.<sup>2</sup>

4. Finally, the common use of *ana* in adverbial phrases is probably in many cases a secondary development from the construction of the preposition as a complement. So closely, indeed, are the ideas allied that, for example, in the expression 'to reckon anything as booty,' just cited as an instance of the complementary *ana*, the words 'as booty' could readily be construed as a purely adverbial phrase, which is actually the case in *šallāti š amnu*, Senn. Taylor iii. 20, a parallel to and synonym with *ana šallāti amnu*. Similar examples of adverbial constructions with *ana* are *ana eṣṣati epuš* 'I made it anew,' II. R. Tig. iii. line 36; and the fre-

<sup>1</sup> See Caspari, *Arab. Gram.*, p. 264.

<sup>2</sup> Dillmann, p. 308.

quently recurring idioms *ana pat gimrišnu* ‘in their entirety,’ Ašurb. iv. 102; *ana la mēni*<sup>1</sup> ‘without number (innumerably),’ Shalm. ii. 65; *ana mu'did* ‘in great quantity,’ Lay. 43, 14, etc. It is probable, however, that there is a large class of adverbial phrases with *ana*, in which the preposition is more nearly allied in meaning to the original *ana* of motion towards. This seems to be the case in *ana iupliš* ‘downwards,’ I. R. Esarh. ii. 16; *ana rūqiš* ‘afar,’ Sarg. Prunkinschr. 111; *ana sixirtiša* ‘in its extent,’ Sarg. Cyl. 13, etc. In Hebrew, Arabic and Ethiopic, the adverbial preposition is **בְּ** or **לְ**, respectively; but in Hebrew **בַּ** occasionally occurs as an adverbial preposition, as in **לְכַתֵּחַ** ‘quietly,’ **לְשָׁבֵעַ** ‘sufficiently,’ etc.

Kraatzsehuar's idea regarding the derivation of both *ana* and *ina*, that the ending *-na* in both prepositions is in reality the demonstrative enclitic stem, seen for example in *šinatina*, and that the root vowels *i* and *a* are more or less arbitrary developments from an unknown stem, is highly satisfactory as far as it goes;<sup>2</sup> but he has made no attempt to explain why one preposition should be *ina* with the *i*-vowel and the other *ana* with the *a*-vowel. His idea that the *i* of *ina* may be cognate with the cohortative prefix *i* will hardly bear investigation. The cohortative *i* is probably a form of exclamation, perhaps cognate with the *i* or *e* of **הֲ** and **וְ**. It may, however, be a fragment of the Assyrian pronoun *anini* ‘we,’ as it occurs only with the first person plural. A study of the syntactical usage of both *ina* and *ana* seems to indicate that the existence of the root vowels is not to be explained as a mere accidental phenomenon. On the contrary, it would appear that the presence of these vowels may be accounted for by going back to what seems to be the fundamental or primary meaning of both prepositions.

It has been shown in the paper on the syntax of *ina* that the fundamental signification of that preposition was a locativo one ‘at’ or ‘within.’ The various uses of *ana*, on the other hand, seem to be developments from an original idea of motion towards. If these facts are borne in mind, the theory suggests itself that the root vowels of the two particles may perhaps be etymologically identical with the vowels of the genitive and accusative case-endings respectively; and an investigation of the use of these cases in Semitic seem to lend probability to this view. It is certain that the Semitic genitive was primarily the prepositional case, e. g., the form required according to the strict rules of syntax whenever a preposition governs a noun. It is not impossible that the original signification of the case-ending *-i* was condition or location, with much the same meaning as that of the *i* in the fundamental *ina*. The very idea of possession, so peculiar to the genitive case, may be a development of this original locative. It is easy to imagine, for example, the development of the conception of

<sup>1</sup> Also with *ina*; see JAOS. xvi. p. coxxii.

<sup>2</sup> *Beiträge zur Assyriologie*, I. p. 393. For other views, see the discussion in JAOS. xvi. p. ccxxxv.

possession from the idea of proximity:—*bit amēli* ‘house of the man’ = ‘house at or near the man.’ The analogy, moreover, between the *a* of *ana* and the accusative ending *-a* is much more striking. There can be no doubt that the accusative case was actually used in Semitic to denote motion towards. To understand this we have only to compare the relic of this case in the so-called *directive* in such expressions as *הַשְׁמִימָה* ‘towards the heavens’; *הַעֲירָה* ‘towards the city.’ The accusative of the person or thing is also used in Arabic after verbs of motion, especially those of coming and approaching; thus with the pronominal suffix *يَدِيْهِ* زَانَ يَدِيْهِ ‘Z. has come to us,’ etc. It even appears possible to trace the common objective force which the ending *-a* gives to a noun back to the original idea of motion towards or against. It seems not improbable then that the ideas of position-condition and motion towards may have crystallized in the vowels *i* and *a* respectively, so that they appear, not only as the genitive and accusative case-endings, but also as the root vowels of the Assyrian prepositions *ina* and *ana*.

Although in Assyrian the three case-endings were sometimes used indiscriminately, owing to the fact that the proper usage had never become fully fixed, it was nevertheless a well defined general law of the language that the endings *-u*, *-i*, and *-a* were nom., gen., and accus. respectively, and they are ordinarily used in this way.

The striking syntactical similarity between *ina* and the Heb. *בְּ*, and between *ana* and the Heb. *לְ* (*לֵאָל*) may be explained by the supposition that, while the Assyrian was content to prefix merely the locative vowel *i* and the directive vowel *a* to the demonstrative root *-na*, it became necessary in the other Semitic idioms to add to these combinations the more distinctly prepositional elements *בְּ* and *לְ*. Traces of this are seen in the Sabacan *לְזָכָן*. It must be supposed then that the final *-n* ultimately disappeared. It is decidedly not permissible to assume the aphaeresis of an original *בְּ* or *לְ* in Assyrian, e. g., that *ina* and *ana* were worn down from an earlier *\*bina* and *\*tana*. The prepositional element *לְ* is well known to the Assyrian in the combination *la-pa-n* ‘before,’ and there would probably remain some trace of its occurrence with *ana* had this ever been the case. The *בְּ* and *לְ* are later additions to the original prepositional vowels *i* and *a*; cf. *בְּ* and *לְ* in *לְ*. In the course of time, however, these vowels coalesced in a simple *-*, e. g., *בְּ*, *לְ*. It seems highly probable, therefore, that the Assyrian *ina-ana* may actually be cognate, as far as the root vowels are concerned, with their syntactical equivalents the *בְּ* and *לְ* of the other Semitic dialects.

<sup>1</sup> Senn. Taylor, i. 82.

<sup>2</sup> The only instance of the occurrence of *בְּ* in Assyrian is the Canaanite gloss *badiu* = בְּדָיְהָ ‘in his hand’ in the Tell-el-Amarna letters, No. 72.

*The Syriac Expression euangelion dām'phar' shē.*—By RICHARD GOTTMIL, Professor in Columbia University, New York, N. Y.

In vol. xviii. of this JOURNAL (pp. 176 ff.) Dr. Torrey has brought up again the vexed question as to the real meaning of the words **מִתְּבָא** and **מִתְּבָא**, especially in the phrase **מִתְּבָא בְּשָׁמֶן?**, which is prefixed to at least four copies of the Syriac gospels. He has sought a new explanation of the strange term by connecting it with the later Hebrew **מִפְּרוֹשׁ** in the expression **שָׁם תִּמְפְּרוֹשׁ**. Both the words **מִפְּרוֹשׁ** and **מִתְּבָא** he takes as equivalent to **קָדוֹשׁ** in the sense of "holy." The meaning of the Hebrew **מִפְּרוֹשׁ** need not detain us here. But Dr. Torrey seems almost to explain one crux by another; for the meaning of the Hebrew term is by no means certain—every scholar who has treated of it has offered a different explanation.

I can not see that Dr. Torrey has in any way invalidated the argument advanced by Zahn, and accepted by Wright and Tixont, to prove that the expression has reference to copies of the Gospels in which the four books were kept in their separate form, and not worked into a harmony as in the *Diatessaron* of Tatian. The words mean, "Gospels made up of that which is kept separate"; for the use of the *dālath*, cf. such expressions as *لَفْسٌ*, *مَعْدُلٌ*, *مَعْدُلٌ*, *مَعْدُلٌ* (Nöldeke, § 235). Nor can I see that *لَفْسٌ*, *مَعْدُلٌ*, *مَعْدُلٌ* would in any wise be a "singular way of expressing the idea 'separate Gospels,'" even if we take this translation in lieu of the other possibility 'separated Gospels,' i. e. separated one from the other.

The expression **لَا يَعْلَمُ**? **مَنْ مَنْ**? can not be explained without reference to the other expression **لَا يَعْلَمُ**, **مَنْ مَنْ**. And there can be no doubt that this last designates what we are accustomed to call the *Διατεσσάρον*. Tatian is called by Bar Ali (Payne Smith, 1278) **مَنْكِنْ**, "the one that mixed up the Gospels"; and Bar Salibi, to whom the greater part of our knowledge concerning the Syriac Diatessaron goes back, explains **لَا يَعْلَمُ**, **مَنْ مَنْ**, (*B.O.*, ii. 150). Bar 'Ehlhrayā also, in the preface to his commentary on Matthew (Spanuth seems to have omitted the introduction; but see *B.O.*, i. 57), has the words **لَا يَعْلَمُ**, **مَنْ مَنْ**? **أَوْ لَا يَعْلَمُ**, **مَنْ مَنْ**? But, says Dr. Torrey, "the appeal to **لَا يَعْلَمُ**, **مَنْ مَنْ**? is not justified. The Syriac has its recognized ways of expressing the idea supposed to be intended here (the opposite of 'mixed'), and the phrase under discussion is not among them." But one has

only to glance at the first two or three columns in Payne Smith's *Thesaurus*, s. v. فُصْفَفْ (cols. 3299 sqq.) to convince himself that this is the very word used to express this idea: فُصْفَفْ is the opposite of مُكْلَفْ, and in a citation noted by Payne Smith, col. 1280, we have لفظ مختلط مُكْلَفْ for "discrepancy and congruence."

We may, I think, go even a little further and translate فُصْفَفْ, "arranged in their regular order" (Bar Ali فُصْفَفْ حَسَدَ), which would fit in well with the expression لفظ مختلط مُكْلَفْ, the title of a MS. containing the prescribed readings for the year—not "in arbitrary order," as Dr. Torrey says, but laid down in a definite sequence (see Wright, *Catalogue*, p. 193, b.). So, also, Dionysius speaks of an author "whose Mémré, arranged in regular order, exist to this day" (ed. Tullberg, 158, 4). A Vatican MS. has the title مُتَعَدِّدَةٌ مُكْلَفَةٌ مُكْلَفَةٌ, "readings arranged in order, one after the other" (Catalogue of the Vatican Library, ii. 190); and a MS. of the British Museum (Rosen, p. 38) has the title لفظ مختلط مُكْلَفْ مُكْلَفْ مُكْلَفْ i. e. "put in order, arranged."

Dr. Torrey's last argument is derived from the fact that this perplexing title is used also at times with reference to the Book of Psalms: لفظ مختلط مُكْلَفْ حَسَدَ; or, simply لفظ مختلط مُكْلَفْ (see also Payne Smith, *Catalogue*, cols. 35, 42, 47). "These copies of the Psalms are not divided into lections," says Dr. Torrey. But it is well known that the Syriac Psalter is divided into 15 مُكْلَفَاتْ and each مُكْلَفَةٌ into 4 مُكْلَفَاتْ (see Payne Smith, *Catalogue*, cols. 35 (note) and 41; Bar 'Ehbrayîl in the introduction to his commentary on the Psalms, ed. Lagarde, p. 100: حَسَدَ مُكْلَفَاتْ حَسَدَ مُكْلَفَاتْ حَسَدَ مُكْلَفَاتْ حَسَدَ مُكْلَفَاتْ). The expression لفظ مختلط in some of the Bodleian MSS. can well mean hero also "arranged according to order; e. g. MS. Huntingdoa 250, [§] مُكْلَفَاتْ مُكْلَفَاتْ مُكْلَفَاتْ مُكْلَفَاتْ; and Budge, *Thomas of Margia*, ii. p. 515, note). The expression لفظ مختلط in some of the Bodleian MSS. can well mean hero also "arranged according to the recension and commentary," etc. Then follows the divisioia iato مُكْلَفَاتْ and مُكْلَفَاتْ as mentioned above.

The attempt of Dr. Torrey to dispose of the testimony of Rabula of Edessa (411–435) is not successful. The translation of Zahn is certainly suggested by the occurrence of the phrase in the church laws; with any other meaning, the regulation would be superfluous. The same criticism may be made of Abbé Martin's distinction between the privato and the publico use of the Diatessaron, and his contention that the latter only is intended (*Le da recrapov de Tatien*, Paris, 1883, p. 10).

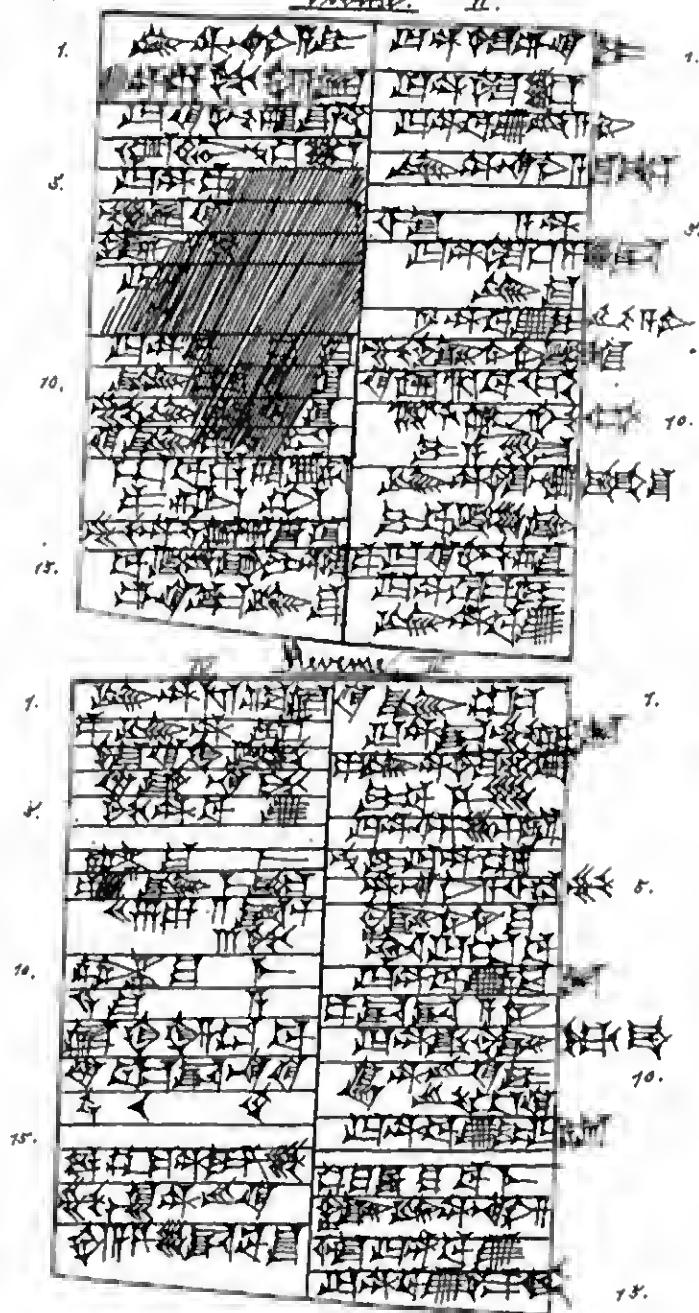
Two Old-Babylonian Tablets: edited, with a note, by R. J. Lau, Columbia University, New York City.

In 1895, Columbia University acquired some 400-500 tablets, among them a number coming evidently from the find made at Telloh by E. de Sarzec in 1894, and of historical value because of the dates in their colophons: see Hilprecht, *OBG* I pt. 2, p. 30; also Scheil, *Recueil des travaux, etc.*, XVII. 38; and Thureau-Dangin, *Revue Sémitique*, V. 72, *Revue d'Assyriologie*, III. 142 ff.

The tablets here given are pay-lists for the temple-workmen, but with the spaces for the wages left blank; and the spaces have for some reason never been filled in, except in No. 2, col. III., where 10 ka of grain are entered against the names of Ur-Nir-mar-ki (l. 1) and Ur-Bau (l. 3). No. 1 is dated the 10<sup>th</sup>, and No. 2 the 12<sup>th</sup> of the month Isin-Dumuzi. No. 1 is of baked gray clay, 64x101 mm. in size. No. 2, barring its injuries, is similar. In contents, the tablets are practically identical: but cf. No. 1, II. 18.3 with No. 2, II. 18.3; No. 1, II. 7 with No. 2, II. 7; No. 1, IV. 14 with No. 2, IV. 8. No. 1, III. 12 and No. 1, IV. 11 are omitted on No. 2.

No. 1.

I. Scheme. II.



No. 2.Glomer.Glomer.

Old Babylonian Systems of Weights and Measures.—By  
George A. Reisner, Harvard University.

In January of last year, the Royal Museum in Berlin received about 500 clay tablets, presented by Mr. James Simon. In editing these tablets which proved to be account books of the temples at Telloh from the time of the 2d dynasty of Ur, a number of new points concerning the old Babylonian systems of weights and measures came to light, and were published by myself in the *Sitzungsberichte* of the Berlin Academy Vol. XXIX, p. 417 ff. (April 9, 1896). The conclusions arrived at in that article (which has never appeared in English) and the facts upon which they were based, form the body of the present article.

### I. Measures of Area.

$$1 \text{GAN} (\text{◀} \text{▬} \text{▬}) = 1800 \text{ SAR}.$$

$$1 \text{SAR} (\text{▬} \text{▬} \text{▬}) = 60 \text{ GIN}.$$

$$1 \text{GIN} (\text{▬} \text{▬} \text{▬}) = 180 \text{ SE} (\text{◀} \text{◀}).^1$$

$$1 \text{SAR} = 1 \text{sq. GAR-DU} (\text{Thousand-Bangin}).^2$$

The proof that 1 SAR = 60 GIN, is furnished, for example, by Y.A. Pl. 22.13

<sup>1</sup> appears by analogy (see system of weights).

<sup>2</sup> See Revue L'assyrologie, Vol. IX, No. 1, 1891, pp. 12-27.

which reads as follows:

Subtracting from the amount given in l.1, the amount given in l.5, we obtain as result  $1187\frac{1}{2}$  SAR 2½ GIN - 216½ SAR =  $971\frac{1}{2}$  SAR 2½ GIN. Comparing this result with remainder given in l.6 of the tablet, we get the equation  $\frac{1}{2}$  SAR = 10GIN. Therefore,  $1$  SAR = 60GIN. Two other examples, taken from the same tablet, yield the same result.

The equation,  $1\text{GAN} = 1800 \text{ SAR}$ , is proved conclusively by a number of items given on Y.A.Th. 2210. For example L 19 of Col. III reads: "5 GUD-APIX 120 SAR-TA A-SAG 5 ( $\triangleright$ ) 1 GAN"; - i.e. "5 ploughoxen at 120 SAR apiece (are sufficient for) a field of GAN." Prüfen  $5 \times 120 \text{ SAR}$ , or  $600 \text{ SAR}$ , =  $\frac{1}{2}$  GAN, and  $1\text{GAN} = 1800 \text{ SAR}$ . In addition to a score or more of similar items, this equation is supported by the fact that on tablet Y.A.Th. 2212, we find the sums  $402 \pm \text{SAR}$  and  $1122 \pm \text{SAR}$ , and on tablet Y.A.Th. 2213 we find the sum  $1426 \pm \text{SAR}$ . Such figures are conceivable only when  $1\text{GAN}$  exceeds 1. Apparently it means that each ploughed  $120 \text{ SAR}$  of land a day.

142 GAN, — a fact which agrees entirely with the equation established above.

Besides this system of measures of area, the new tablets use a peculiar notation of the GAN, as follows:

	= $\frac{1}{2}$ (GUR) GAN.		= 1 (BUR) GAN (= 1800 SAR).
	= $\frac{1}{4}$ " "		= 10 " "
	= $\frac{1}{8}$ " "		= 60 " "
	= $\frac{1}{16}$ " "		= 600 " etc.

The proof of these conclusions is to be found in a number of calculations from different tablets. V.A.Th. 2201 gives a list of fields and the amounts of grain used in sowing them. L. 2 of Rev. tab. II, gives the sum of the fields which required  $\frac{1}{2}$  GUR of grain per GAN, as (A) . The single entries of such fields are as follows:

Obv. I, 9:			
I, 3:			"
I, 7:			"
I, 11:			"
I, 15:			"
I, 1:			"

The addition of these entries gives us the sum (B) . Now, according to the notation set forth above, 600 are equal to 2 GAN, 200 are equal to 2 ; and thus, sum (B) is reduced to (32 GAN) or sum A, — the sum given on the tablet.

Rev. II, 5 of the same tablet, gives us the sum of the fields that required 1 gur of grain per gan, (A)     .

The single entries are:

Ch. I, 1:				
I, 8:				
I, 13:				
I, 2:				
I, 7:				
I, 15:				

The addition of these entries gives us the total (B)  14 $\frac{1}{2}$ , or 14.5 gans. According to the proposed notation,  $\square \triangle$  are equal to  $\triangle \square$ ,  $\square \square$  are equal  $\square + \triangle$  and  $\square \triangle$  are equal to  $\square + \triangle$ . Thus sum B is reduced to      or sum A.

On VAT 2202, the sum of the amounts of seed-grain used for three fields is given as 168 $\frac{1}{2}$  gur (Rev. 6 obv. III). Leaving the  which occurs in the second field, out of the calculation, and using the notation given above, we get:

$$\begin{array}{l}
 58 + (\square \triangle \square \triangle \square) \text{ gur at } 1 \text{ gur per gan} \text{ [makes } 81\frac{1}{2} \text{ gur]} \\
 59 + (\square \triangle \square \triangle \square) \cdot \cdot \cdot 14 \cdot \cdot \cdot [ \cdot \cdot \cdot 7\frac{1}{2} \cdot \cdot ] \\
 1 ( \square \triangle \square ) \cdot \cdot \cdot 14 \cdot \cdot \cdot [ \cdot \cdot \cdot 7\frac{1}{2} \cdot \cdot ] \\
 \hline
 \text{Total: } 168\frac{1}{2} \cdot \cdot
 \end{array}$$

Thus we obtain  $168\frac{1}{2}$  GUR instead of  $168\frac{2}{3}$  GUR, the total given on the tablet. The difference is, of course, due to the omission of  $\triangle \text{GAN}$  (at  $1\frac{1}{2}$  GUR) in the second field. Therefore,  $\triangle \text{GAN} : 1 \text{GAN} :: \frac{1}{2} : \frac{1}{3}$ , and  $\triangle \text{GAN} = \frac{5}{180} \text{ GAN} = \frac{1}{36} \text{ GAN}$ . Another paragraph of the same tablet gives the amount of seed used for three other fields as 641 GUR 225 KA. Leaving  $\triangle \text{GAN}$  in the second field out of the problem, we obtain by the calculation of the single entries 641  $\frac{5}{6}$  GUR, or 641 GUR 250 KA, as the total amount of seed. The difference between our sum and that on the tablet, 5 KA, is due to the omission of  $\triangle \text{GAN}$  in the second field (at  $1\frac{1}{2}$  GUR, or 360 KA). Therefore,  $\triangle \text{GAN} : 1 \text{GAN} :: 5 : 360$ .  $\triangle \text{GAN} = \frac{5}{360} \text{ GAN} = \frac{1}{72} \text{ GAN}$ .

It is also to be noted that neither on the Berlin tablets nor on any of the tablets already published, can more than one  $\triangle \text{GAN}$  be found, more than one  $\triangle \text{GAN}$ , more than five  $\triangle \text{GAN}$ , more than two  $\triangle \text{GAN}$ , more than nine  $\triangle \text{GAN}$ , more than five  $\triangle \text{GAN}$ , or more than nine  $\triangle \text{GAN}$ . The view put forth by Meissner ("Beiträge zum altbabylonischen Rechtsrecht," p. 126) that  $\triangle \text{GAN} = 10 \text{ GAN}$ ,  $\triangleright \triangle \text{GAN} = 5 \text{ GAN}$ , and  $\triangleright \text{GAN} = 1 \text{ GAN}$  is proved incorrect by the single fact that  $\triangle \triangle \text{GAN}$  occur repeatedly. V.A.Th. 468, published by Meissner himself gives  $\triangle \text{GAN}$  as the sum of  $\triangle \triangle \text{GAN}$  and  $\triangleright \triangle \text{GAN}$ .

Thus the relations of the values of the various notation-signs to each other present the scale:  $\frac{1}{2}(1)$ ,  $\frac{1}{3}(4)$ ,  $\frac{1}{18}(10)$ ,  $\frac{1}{3}(4)$ ,  $1(1)$ ,  $10(8)$ ,  $60(17)$ ,  $600(23)$ , etc. It now remains to be shown that  $\angle GAN$  is really unity. (1) In the first place, the problems presented by the tablets can be correctly solved only when we treat  $\angle GAN$  as unity. In the examples given above, in which the amount of seed-grain used is recorded, we get a total eighteen times too large (i.e. larger than the total on the tablet) if we use  $\angle GAN$  as unity! (2) By taking  $\angle GAN$  as unity we obtain, aside from the factors, the normal old Babylonian scale, the scale which every other system of notation shows at this time, — unity, near of unity, sar of unity, nes of sar, sar of unity, nes of sar, etc. As for the fractions, the other notation-systems offer no analogies (except for  $\frac{1}{3}$ ). It is to be noted however that if we take  $\angle GAN$  as the unit, we get a fraction,  $\frac{1}{4}(1)$ , for which, though expressed repeatedly by  $\frac{1}{4}$ ,  $\frac{1}{3}$ ,  $\frac{1}{18}$ , there was no separate sign in the other systems. (3) We find repeatedly in

<sup>1</sup> Reproduced by Meissner, "Beiträge zum altbabylonischen Rechenschreib", p. 120. Adopted by Oppert, "Comptes rendus de l'académie des inscriptions et belles-lettres" (April 1896). See also Oppert's paper, "Comptes rendus" (Dec. 1896), and Eisenlohr's pamphlet "Ein altbabylonischer Feldurplan" (Lüppitz, 1896). The foundation of Oppert's theory was destroyed by Thureau-Dangin's article in the "Revue d'assyriologie" (II, pp. 13-27).

<sup>2</sup> First set forth by Lehmann in MPA p. 11 where the pamphlets on this subject are named.

the tablets sums of 100 ŠAR, 180 ŠAR, 200 ŠAR, and even as high as 1426 ŠAR (see above). There would be out of the question, if  $\sigma$ -GAN (= 100 ŠAR) were unity. But since  $\sigma$  ( $\neq 1$ ) ( $\neq 1800$  ŠAR) is unity, these sums are to be expected, expressed either in ŠAR or in fractions of the next higher unit.

## I. System of Weights.

1 Talent ( $\text{ל}$ ) = 60 Minas. 1 Mina ( $\text{מ}$ ) = 60 Shekel

1 Shekel (1 ₪) = 180 ŠE (₪).

It is unnecessary to reproduce the proofs for the first two equations as they have been generally <sup>assumed</sup> true for old Babylonian times. As for the third equation, Meissner (MBP p. 94) has shown that 1 shekel contained more than 40 ŠE; and Peiser (KB, Vol. IV p. 240) states without giving his reasons that 1 shekel may have contained either 120 or 180 ŠE. Two large tablets in the Berlin collection, VA.Th. 2243 and 2244, give the values of different objects and materials in silver. VA.Th. 2243, XIII ll. 18-21 reads:

國之有司其無忘也

"87 (pieces) of GUGU-DUMU wood at 60 (pieces for one shekel) makes 1½ shekel 2½ E of silver." 87 pieces of wood at 60 for a shekel makes  $\frac{87}{60}$  shekel.  $\frac{87}{60} = 1\frac{27}{60} = 1\frac{9}{20} + \frac{1}{20}$ . Thus the 2½ E of the tablet must equal  $\frac{7}{20}$  shekel. 1. I.e. its silver value is 80 in 1½ shekel 2½ E.

shekel; and 1 shekel =  $\frac{2}{3} \times 2\frac{1}{2}$  SE = 180 SE. All similar examples lead to the same result.

In the notation of the weights, there is little that is unusual. The fact that units of the GUR, or talent, are written with the horizontal wedge, while the units of the other weights are written with the vertical wedge, has been indicated above. The following fraction-signs are, however, of interest:

$\frac{\text{shekel}}{\text{mina}} = \frac{2}{3}$  shekel;  $\frac{\text{mina}}{\text{mina}} = \frac{1}{3}$  ( $\frac{1}{3}$ ) mina. These are used at least when silver is the material weighed, even without the signs for mina or shekel (of the similar use of  $\frac{x}{x}$ ,  $\frac{x}{x}$  in this and in later times).

### III. Measures of Capacity.

1 KARU ( - - ) = 3600 GUR (also written ).

1 GUR ( - ) = 5 [PIS] = 300 KA. 1 KA ( ) = 60 GIN ().

The system of measures of capacity is the same as that first proposed by Lehmann (Z.A. II p. 290) on the basis of YAH. Th. 2596; and, with the exception of the double notation for 3600 GUR, the notation is the same. The equation, 1 KA = 60 GIN, appears from a number of tablets; for example, YAH. 2336 Obv. 3:

<sup>1</sup> See also Oppert, Z.A. II 371 and I 87, and Meissner, MBP p. 98.

(apices) make 7 KA + GIN of oil" (lit. "its oil is its"). Now,  $106 \times 4\text{ GIN} = 424\text{ GIN}$ .

Thus,  $424\text{ GIN} - 4\text{ GIN} = 7\text{ KA}$ .  $1\text{ KA} = \frac{420}{7}\text{ GIN} = 60\text{ GIN}$ .

#### IV. Ordinary Notation.

$1 = \text{one} \text{ } \text{I}$ .  $10 = \text{L}$ .  $60 = \text{V}$ .  $600 = \text{R} (60 \times 60)$ .  $3600 = \text{S}$ .  $36000 =$

$\text{X} (10 \times 3600)$ .  $72,000 = \text{Y} (20 \times 3600)$ .  $108,000 = \text{Z} (30 \times 3600)$ . Etc.

$216,000 = \text{A} (60 \times 3600)$ .

One of the peculiarities of the ordinary notation is the method of writing 9 (and even 7 and 8), namely,  $\text{GTT}$  ("10 less 1", or rather "10 there remains one"). The character of this expression is well shown by such cases as  $\text{GTT} - \text{I}$ , "20 less 2 gur",  $\text{GTT}$  "20 gur less 180 ka", and  $\text{GTT} \text{ I} \text{ V} \text{ A} \text{ Th} \text{ 2244} \text{ S} \text{ 12}$  ("VA.Th.2244 S 12") "+ shekel less 5 SE". LAL is also used ordinarily to mark the remainder. This  $\text{GTT}$  explains the later  $\text{G}$ , the abbreviation of  $\text{GTT}$ .  $\text{G}$  is merely a cursive corruption of  $\text{GTT}$ . In the more carefully written of the Berlin tablets,  $\text{GTT}$  already appears as  $\text{G}$ .

<sup>1</sup> After I had finished the article which appeared in the Journal of the Berlin Academy, Dr. Lehmann called my attention to Jensen's "Katalog", p. 106, note where Jensen has very correctly taken  $\text{GTT}$  to mean "unscripted".  $\text{GTT}$  is probably a mis-tide (of the Assyrian scribes) for  $\text{GTT}$ . See also Oppert, Z.A. X.

PROCEEDINGS  
OF THE  
AMERICAN ORIENTAL SOCIETY,

AT ITS  
MEETING IN BALTIMORE, MARYLAND,

April 22d, 23d, and 24th, 1897.

THE Society assembled at Baltimore, in the Donovan Room of McCoy Hall of the Johns Hopkins University, on Thursday of Easter Week, April 22d, at 3 p. m., and was called to order by its President, President Daniel Coit Gilman, of the Johns Hopkins University.

The following members were in attendance at one or more of the sessions :

Adler	Hastings	Levy	Schanfarber
Arnold, W. R.	Haupt	Macdonald	Scott
Bloomfield	Hezard	Mahoney	Smith
Brunau	Hyvernat	Moore, G. F.	Spieler
Carus	Jackson	Mullan	Toy
Gilderleeve	Jastrow	Ness	Tracy
Gilman	Johnston	Oertel	Ward, W. H.
Gottheil	Land	Price	Webb
Grimm	Lanman, C. R.	Rosenau	Wood, G. J.
Guttmacher	Lawler	Sanders	Wood, H.

[Total, 40.]

Professor Bloomfield, of Baltimore, presented the report of the Committee of Arrangements in the form of a printed program. The opening of the sessions was thereby set for half past nine o'clock mornings and for three o'clock afternoons; and the annual business of the Society was made the first order for Friday morning. President Gilman invited the members of the Society to take luncheon with him at his house on Friday at half past one. The invitation was accepted with the thanks of the Society. The presentation of com-

munications was now begun. Papers by Messrs. Jastrow, Jackson, Gottheil, Macdonald, Adler, Smith, Peters, and Haupt (those numbered respectively 25, 20, 7, 31, 1, 44, 37, and 13 in the list below) were laid before the Society. In connection with Dr. Adler's paper, Professor Gottheil, as Chairman of the Committee appointed to make a Catalogue of Oriental Manuscripts existing in American Libraries (see JAOS. xiv., pages i and exlvi., = PAOS. for Oct. 1888 and Oct. 1889), presented a preliminary inventory of such manuscripts, in card-catalogue form. The Committee was continued. At 5.15 the session was adjourned.

The Society reassembled at half past nine on Friday morning and proceeded to business.

The minutes of the last annual meeting, at Andover, April 9th to 11th, 1896, were read by the Recording Secretary, Professor Moore, of Andover, and approved.

In the absence of the Corresponding Secretary, Professor Hopkins, of Yale, Professor Oertel, of Yale, as Acting Secretary, presented letters from Professor Salisbry and Mrs. W. D. Whitney, of New Haven, giving us much-valued and gratefully received assurances of their continued interest in the work of the Society and in its prosperity.

Professor Lanman, of Harvard, also presented some correspondence, a few items of which may be mentioned. The letters included one from Professor Hopkins,<sup>1</sup> which was dated "on the very field of the great battle" of the Mahā Bhārata, "Kurukshe tra, 7th Dec., 1896." "Imagine the plain," he writes, "(and a few jackals are still stalking over it) stretching to the lake where Duryodhana hid his coward head. I could almost see Bhīma pursuing him as I wandered round the edge of it under the great trees, and among the ruins of three hundred temples which line the shore on the west and north." Dr. Fahrer, Director of the Museum at Lucknow, and Professor Böhler, of Vienna, write concerning the recent discovery of the column set up by Asoka to mark the birth-place of Gotama Buddha. Professor Nöldeke, of Strassburg, sends full and most appreciative comments on Mr. H. C. Warren's *Buddhism in Translations*.

Dr. Sergius Oldenburg of St. Petersburg writes that Petrofsky, the Russian Consul-General in Kashgar, has brought back two birch-bark manuscripts in Kharosthi characters, by far the oldest Indian manuscripts known. Oldenburg believes that they are to be referred to the first century before or after Christ. He is going to publish complete facsimiles of both manuscripts, and hopes to have them ready for the International Congress at Paris next autumn. He has also begun a series of Buddhist publications, which promises to be of great value. Among the works undertaken is the *Abhidharma-kōca-vyākhyā*, whose importance

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<sup>1</sup> Interesting accounts of his travels and observations are contained in his letters to *The (New York) Nation*, in the numbers for Dec. 24 and 31, 1896, and for April 1, 8, and 15, 1897.

has been recognized since the days of Eugene Burnouf. Othera are the *Cikṣā-samuccaya*, by Cecil Bendall, the *Rājatrapāla-puriprcha*, by Finot, the *Ganda-vyūha*, *Savarṇa-prabhāsa*, *Dayabhūmiçvara*, and the *Madhyamaka-vṛtti*.

Dr. Stein writes from his camp, Mohand Marg, in the Himalayas of Kashmir. He had been commissioned by the Kashmir Durbar to translate into English the history of Kashmir or *Rājatarānginī*, which had been edited by him in Sanskrit. He is the hard-worked principal of the Government Oriental College at Lahore, and says : "In order to work undisturbed, I came straight up in June to this *Marg* or plateau, some 11,000 feet above the sea, where I have not seen a white face for the last three months. In this delightful Alpine solitude I could work all day long without feeling tired ; and thus had two days ago the satisfaction of getting to the last of the 8,000 odd Shlokas." The history is to be published by Constable and Co., in London.

The names of recently deceased members were reported. The record is as follows :

#### CORPORATE MEMBERS.

Rev. Dr. Oliver Crane, of Boston, Mass. ;  
 Dr. Olaus Dahl, of the University of Chicago ;  
 Prof. Isaac Hollister Hall, of the Metropolitan Museum of Art, New York City ;  
 Rev. Dr. Dwight Whitney Marsh, of Amherst, Mass. ;  
 Dr. Edmund Nathaniel Snyder, of Cleveland, Ohio ;  
 Rev. Dr. William McLivre Thomson, of New York City ;  
 Prof. Josiah Dwight Whitney, of Harvard University.

Dr. Hall<sup>1</sup> was a Vice-President of the Society, and long one of its most active and useful members. He was born at Norwalk, Connecticut, Dec. 12, 1837, the son of Rev. Edwin Hall, who subsequently for years was a leading member of the Faculty of the Auburn (N. Y.) Theological Seminary. Dr. Hall graduated at Hamilton College in 1859, serving thereupon as assistant to the eminent astronomer, Dr. Peters, and took his degree in laws in 1865 at the Law School of Columbia College, N. Y. After ten years of practice, he became professor in the Syrian Protestant College at Beirut. On his way thither, he visited the collections of Cypriote antiquities at London, Paris, and Turin, and then went to Cyprus to study the inscriptions *in situ*. After two years he returned home from Syria, and became widely known by his work as associate editor of *The Sunday School Times* of Philadelphia. He was appointed Curator of the Department of Sculpture of the Metropolitan Museum of Art in 1886; and in this position he continued, rendering invaluable services to the

<sup>1</sup> Sketches of his life are given in Johnson's *Cyclopædia* and in the Supplement to the Schaff-Herzog *Encyclopædia of Religious Knowledge*.

Misenm, until his death, which occurred July 2, 1896. He was an active member of the famous New York "Greek Club," and, after the late Ezra Abbot, was the first authority in America on the history of the printed text of the New Testament. He was particularly interested in Syriac studies, and did much to further them. In this Journal and that of the Society of Biblical Literature he described many of the manuscripts in this country; from one of them he published a phototype reproduction of the rare Antilegonien Epistles. In a codex belonging to the college library in Beirut he discovered a hitherto unknown recension of the Gospels, which he identified with the lost Philoxenian version. His scholarship was deep and thorough; his industry, indefatigable; his conscientiousness and accuracy, marvellous. His untimely death is a deplorable loss to American scholarship, to our Society, to the Museum, and through it to the great public which the Museum is to instruct and enoble.

Remarks upon Dr. Hall's services to Oriental learning in this country were made by Dr. Ward, Professors Moore and Gottheil, and Mr. W. R. Arnold.

Professor J. D. Whitney,<sup>1</sup> so distinguished in geology, was—as has been often remarked—a man of unusual ability and attainments in the field of language. His vast learning in subjects so diverse was turned to good account during his studies of the names of minerals and of the terms relating to geology, mining, metals and metallurgy, physical geography, and fossil botany, in connection with his work upon the *Century Dictionary*. It is interesting to see how he has brought linguistic evidence to bear upon the questions treated in his *Climatic changes of later geological times*, for example, page 237. And his charming little book called *Names and places: studies in geographical and topographical nomenclature* (Cambridge, 1888), is, as its title indicates, a yoking together of philology with natural science. He had been a faithful helper of the Society for nearly forty years; and it may well be that the intelligent sympathy which he brought to the work of his brother William was, albeit indirect, not the least of his services to our Society.

Dr. Dwight Whitney Marsh, a cousin of Professor J. D. Whitney, and of William D. Whitney, was born in Dalton, Mass., Nov. 5, 1823, graduated at Williams in 1842, studied at Andover, and then at Union, graduating there in 1849. He sailed for Turkey the same year, and was stationed for ten years at Mosul, at the eventful time when the explorations were going on under the direction of Layard and later of Rawlinson. Layard gave him several slabs, and the first were sent to Williams College. Afterwards, Dr. Marsh sent to the Wadsworth Athenaeum at Hartford, Conn., to the New York Historical Society, and to the Mercantile

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<sup>1</sup> See the Encyclopædias and especially the *Harvard Graduates' Magazine*, vol. 6, pages 206–209, Dec. 1896.

Library of St. Louis. Other missionaries remembered other colleges in a similar manner. Dr. Marsh sent to friends and scientists many antiquities and other things of interest,—minerals, coins, and Assyrian tablets and cylinders. Upon his return from Turkey, he published the biography of his missionary friend, Samuel Audley Rhea, *The Tennessean in Persia*; and, recently, the *Genealogy of John Marsh of Hartford, 1636*, his own ancestor. This work, of over six hundred pages, was issued in 1895, and in its completeness, accuracy, literary merit, and in the simple and original method of its indexing, holds high rank among works of its class. He died June 18, 1896.

Dr. Crane was born in West Bloomfield (now Montclair), N. J., July 12, 1822, and graduated at Yale in 1845. After studying at Andover, he graduated at Union Theological Seminary in 1848, and the next year sailed for Turkey, where he worked as a missionary, in charge of the stations at Aintab and Aleppo, Northern Syria. After several years at home, he returned to the East and was stationed at Adrianople. His later years were divided between ministerial duties in this country, missionary work and tours of study in the East, and literary pursuits. He died in Boston, Nov. 29, 1896.

Dr. Thomson, author of *The Land and the Book*, was born Dec. 31, 1896, and was for very many years a missionary in Syria, first under the American Board and from 1870 under the Presbyterian Board. He died April 8, 1894.

Dr. Snyder was the valedictorian of his class at Harvard in 1886, and was appointed to a traveling fellowship, which he held during three years of work at Berlin and Leipsic. His Indian studies, begun at Harvard, he continued under Weher and Oldenberg, and published as his doctor's dissertation *Der Kommentar und die Textüberlieferung des Mahāvārīsa*, Berlin, 1891. He died Oct. 1, 1896.

The Treasurer, Mr. Henry C. Warren, of Cambridge, Mass., presented to the Society, by the hand of Professor Lanman, his accounts and statements for the fiscal year extending from April 7, 1896, to December 31, 1896. President Gilman had already appointed (in April, 1896—see JAOS. xvii. 153) Professors Toy and Lanman as an Auditing Committee to examine the Treasurer's funds and accounts. The Committee reported to the Society that on the 28th of January, 1897, they had examined the accounts and vouchers of the Treasurer and his evidences of actual possession of the Society's property, and were satisfied that all was in due order.

The Society accepted these findings as satisfactory—the foregoing report to be published in the *Proceedings* as a certificate of acquittance to the Treasurer, as prescribed in By-law III. c (see JAOS. xvii., page 202).

The usual analytical summary of the General Account follows:

## RECEIPTS.

Balance from old account, April 6, 1896.....	\$1,947.15
Assessments (183) for April 7, 1896 to Dec. 31, 1896.....	\$549.00
Assessments (24) for other years .....	96.00
Sale of publications .....	73.37
Income from funds (other than Bradley Fund).....	82.02
Total income for the year.....	801.29
Total receipts for the year .....	\$2,748.44

## EXPENDITURES.

Brass dies (\$4.85) and 17 matrices (\$34.00).....	\$ 38.85
May, 1896, stock of 60-lb.-paper, at 6 cts., 29 reams....	104.40
Journal, vol. xvii., printing .....	604.75
Journal, vol. xvii., binding 581 copies.....	80.16
Journal, vol. xvii., distribution .....	61.60
Clerical assistance.....	76.20
Poetage, express, etc.....	30.68
Job-printing .....	18.25
Stationery .....	6.40
Total disbursements for the year.....	1,081.27
Credit balance <sup>a</sup> on Gen'l Account, Dec. 31, 1896....	\$2,396.92
Less advance from Charles River Bank, Dec., 1896	600.75
	\$1,097.17
True balance for new Gen'l Account, Dec. 31, 1896	1,687.17
	\$2,748.44

The Treasurer adds the following comments :

By reason of the vote (taken April, 1896—JAOS. xvii. 152) that the Society's fiscal year shall correspond with the calendar year, the fiscal year under review consisted of a trifle less than  $\frac{3}{4}$  of a calendar year, falling 97 days short of a twelve-month. The assessment for the 269 days was fixed at \$3 (the proportionate part of \$5 would have been \$3.07); and none of the dividends for January, 1897, could be included. The income (\$801) was accordingly less than the proportionate part (\$1000) of the income of the preceding year (\$1357) by some \$200.

With regard to the expenses, as was set forth in the circular issued just before the meeting, it appears that the new plan of publication entailed an outgo beyond our income, so that we have already fallen behind about \$280. A curtailment of the Society's publications was therefore recommended,<sup>b</sup> on the ground that the only alternative—an increase of income by, say, \$500—was a most improbable one. To secure this we should need over 100

<sup>a</sup> For the details of this recommendation and the action upon it, see page 383.

<sup>b</sup> The sum of items V., VI., and VII., next page.

new, paying, and constant members. Of the 95 corporate members elected from 1885 to 1889, 77 fell away (i. e., resigned, died, or otherwise ceased to be paying members), leaving a net gain of only 18; and of the 140 elected from 1890 to 1895, 88 fell away, leaving a net gain of only 58.

The state of the funds is as follows:

A. PRINCIPAL OF SPECIAL FUNDS.	Apr. 6, 1896.	Dec. 31, 1896.
I. Bradley Type Fund (deposited in New Haven Savings Bank) .....	\$1,542.64	\$1,604.94
II. Cotheal Publication Fund (deposited in the Provident Institution for Savings, Boston) .....	1,000.00	1,000.00
III. Whitney Publication Fund (invested in eight shares of State National Bank stock) .....	1,000.00	1,000.00
IV. Life Membership Fund (deposited in the Suffolk Savings Bank, Boston).....	75.00	75.00
 B. BALANCES BELONGING TO GENERAL ACCOUNT.		
V. Cash in Cambridge Savings Bank .....	\$1,627.67	\$2,222.07
VI. Cash in Provident Inst. for Savings, Boston .....	109.65	181.83
VII. Cash in Suffolk Savings Bank, Boston.....	0.88	13.02
		6,046.86
Less due Charles River National Bank...		009.75
		86,504.79 \$5,347.11

At the meeting of April, 1896, the Directors voted: That "the sum of \$200.00 shall be appropriated as honorary compensation for the services of the editors." The editors waived the payment of this sum.

President Gilman appointed Professors Toy and Lyon of Cambridge as an Auditing Committee for the accounts of the fiscal year of 1897.

The Report of the Editors of the Journal, Professors Lanman and Moore, was presented by Professor Moore. At the last meeting, in April, 1896, Messrs. Ward, Haupt, and Hopkins, appointed a Committee to consider the several questions relating to the Society's publications and to report thereon to the Board of Directors, made the following Report:

1. We recommend that the Journal of the American Oriental Society be issued as a semi-annual periodical, Part I. for January to June, and Part II. for July to December.
2. The number of pages for two semi-annual Parts shall not exceed five hundred.
3. The Journal shall be devoted to the publication of papers on Oriental subjects, under the direction of the Editors, and shall also contain the Minutes of the annual meetings of the Society, with abstracts of papers not published in full, at the discretion of the Editors.

4. No single Part shall be occupied wholly with a single article; but works too long for insertion in a single Part of the Journal should be published in separate volumes, in an Oriental Series, under the auspices of the American Oriental Society, provided the Editors do not think it expedient to publish such treatises in instalments in successive Parts.

5. The editorial management of the Journal shall be in the hands of two Editors, one of whom shall be a Sanskritist, and the other a Semitic scholar.

6. The sum of \$200 shall be appropriated as honorary compensation for the services of the Editors.

7. Your Committee would recommend that Professor Lanman and Professor Moore be appointed Editors.

8. We recommend that the Librarian be requested to take the necessary measures to increase the sale of the publications of the Society by advertising, by establishing new European agencies, etc.; and the Committee would recommend the firm of Luzac & Co., as London agents, and J. C. Hinrichs for the Continent.

9. This arrangement is to take effect April, 1896. The Minutes of the annual meetings shall appear in the Second Part for each year, that for July to December.

The Report was accepted by the Directors, and transmitted to the Editors as a bill of instructions so far as it concerned their work. And by it they had been governed, except in the matter of honorarium.

In accordance with the above instructions, said Professor Moore, the Editors had, since the last meeting, published volume xvii. of the Journal (for the period July-December, 1896; issued in November, 1896, and containing iv + 200 pages); volume xviii., First Half (for January-June, 1897; issued in January, 1897, and containing iv + 201 pages); both these volumes being substantially bound in full buckram and suitably lettered. Professor Moore further reported that volume xviii., Second Half (for July-December, 1897), is nearly all in type, and will be issued as soon as the Proceedings of the present meeting can be printed.

It may here be added that the Whitney Memorial Volume, printed at the joint expense of the American Oriental Society, the American Philological Association, and the Modern Language Association of America, for distribution to the members of these three organizations, is now ready for publication. The Directors have ordered that the copies for the members of the Oriental Society be provided with an extra general title-page stating that it is issued as volume xix., First Half (for Jan.-June, 1898), of our Journal, and with a suitably lettered label or panel on the book to correspond. The special title-page of the book is as follows: "The Whitney Memorial Meeting. A report of that session of the First American Congress of Philologists which was devoted to the memory of the late Professor William Dwight Whitney, of Yale University; held at Philadelphia, Dec. 28, 1894. Edited for the Joint Committees of Publication by Charles R. Lanman. Bos-

ton: Published for the Congress. Ginn and Company. 1897." It contains the addresses of the occasion, the text of the letters from foreign scholars concerning Professor Whitney; the detailed program of the Congress; and a chronological bibliography (in 360 numbers) of Mr. Whitney's writings, with lists of biographical notices and of books concerning him.

President Gilman reported, on behalf of the Directors, that, as Professor Lanman was unable to serve the Society longer as an editor of the Journal, they had appointed Professor A. V. W. Jackson, of Columbia University (to serve in Mr. Lanman's stead), and Professor G. F. Moore, as Editors for the year 1897-98.

The Treasurer, Mr. H. C. Warren, had called the attention of the members to the fact that the present income of the Society could not sustain the rate of expenditure involved in the foregoing orders of the Directors; and he accordingly recommended a curtailment of the publications of the Society, and in particular that the Journal be issued only once a year, as a volume of about three hundred pages, instead of the present annual four hundred pages. After due discussion of the situation, and to the end that the new experiment of prompt and frequent publication might receive a fair trial, the Directors ordered that no change in the manner of issue be made for the ensuing year; especially in view of the fact that the balance to the good in the treasury allows us to continue this course for some time longer without actual deficit.

The Librarian, Mr. Van Name, of Yale University, presented his report through Dr. Oertel. The report showed that the accessions to the Library of the Society during the year have been 65 volumes, 97 parts of volumes, and 137 dissertations and pamphlets. The whole number of titles is now 4917.

The Committee appointed at the last meeting to consider what measures may be taken to promote the Study of the History of Religions, reported by their Chairman, Professor Gottheil, that after mature deliberation, and with the approval of the Directors, they recommend :

1. That the American Oriental Society establish a special Section, devoted to the historical study of religions; and that persons interested in these studies be allowed to join this Section upon the payment of two dollars per annum, and be entitled to a copy of all printed papers which fall within the scope of the Section.
2. That a Secretary be appointed for this Section.
3. That at each meeting of the Society at least one session be set apart for papers devoted to the work of the Section.
4. That the Section co-operate as far as possible with the American Committee for Lectures on the History of Religions.

This report was adopted; and upon the recommendation of the Directors, the following amendments to the Constitution and By-Laws were unanimously adopted:

In article V. of the Constitution, after the words "a Recording Secretary," the words "a Secretary of the Section for the Historical Study of Religions," were inserted; so that the article now reads:

**ARTICLE V.** The government of the Society shall consist of a President, three Vice-Presidents, a Corresponding Secretary, a Recording Secretary, a Secretary of the Section for the Historical Study of Religions, a Treasurer, a Librarian, and seven Directors, who shall be annually elected by ballot, at the annual meeting.

A new article was added to the Constitution, viz.

**ARTICLE XI.** There shall be a special Section of the Society, devoted to the Historical Study of Religions, to which section others than members of the American Oriental Society may be elected in the same manner as is prescribed in Article IV.

A new By-Law was added: viz.

X. Members of the Section for the Historical Study of Religions shall pay into the treasury of the Society an annual assessment of two dollars; and they shall be entitled to a copy of all printed papers which fall within the scope of the Section.

Professors G. F. Moore, Jackson, and Gottheil were appointed a Committee to nominate officers for the ensuing year.

After a brief recess (11 to 11.15), the following gentlemen presented papers: Hyvernat, No. 19; Bloomfield, No. 3; Oertel, Nos. 34, 36, 35; Moore, No. 32; Scott, No. 42; Grimm, No. 8; Haupt, No. 14. At ten minutes after one, the Society adjourned for luncheon at the residence of President Gilman.

The Society re-assembled after luncheon Friday, and received communications from the following: Schanfarber, No. 41; Gutmacher, No. 9; Rosenau, No. 40; Lanman, No. 28; Johnston, No. 23; Gottheil, No. 6.

At five o'clock, the Society held a public session in the large assembly room of McCoy Hall, and Professor Lanman gave an account of some of the principal classes of monuments of archaeological interest in India, illustrated by pictures thrown upon the screen, and spoke especially of the Bharhut sculptures which have been identified with stories in the Jataka Book.

At 5.45, the Society adjourned to Saturday morning. In the evening, about thirty of the members dined together.

The fourth and last session began at 9.45 Saturday morning. First came the remaining business. The following persons, recommended by the Directors, were duly elected:

<sup>1</sup> The full post-office addresses are given in the revised List of Members at the end of this volume.

## AS CORPORATE MEMBERS.

Prof. B. W. Bacon, Yale University.  
Rev. Dr. Charles W. E. Body, General Theological Seminary, New York City.  
Dr. A. Boissier, Geneva, Switzerland.  
Dr. W. Caland, Breda, Netherlands.  
Dr. Paul Carus, La Salle, Illinois.  
Mr. Clarence H. Clark, Philadelphia, Pa.  
Mrs. Oliver Crane, Boston, Mass. (Re-election.)  
Mr. Lee M. Dean, Yale University.  
Prof. James F. Driscoll, St. Joseph's Seminary, Dunwoodie, New York.  
Mr. Wilberforce Eames, Lenox Library, New York City.  
Mr. M. B. Fanning, Duxbury, Mass.  
Dr. W. H. Furness, Wallingford, Pa.  
Miss Ellen R. Giles, Bryn Mawr, Pa.  
Mr. Louis H. Gray, Princeton, N. J.  
Mr. K. J. Grimm, Baltimore, Md.  
Mr. R. P. Karkaria, Bombay, India.  
Mr. H. Kaufman, Baltimore, Md.  
Miss Elizabeth T. King, Baltimore, Md.  
Rev. P. H. Land, Baltimore, Md.  
Rev. Robert Lau, Union Hill, N. J.  
Rev. L. B. Longacre, Spuyten Duyvil, New York, N. Y.  
Mr. A. O. Lovejoy, Oakland, Cal.  
Rev. J. R. Mahoney, Baltimore, Md.  
Dr. Lawrence H. Mills, Oxford, England. (Re-election.)  
Rev. Donald J. McKinnon, Washington, D. C.  
Mr. J. A. Ness, Baltimore, Md.  
Mr. Murray E. Poole, Ithaca, N. Y.  
Mr. William Popper, Brooklyn, N. Y.  
Rev. W. Rosenau, Baltimore, Md.  
Mrs. Janet E. Ruutz-Rees, Wallingford, Conn.  
Prof. F. K. Sanders, New Haven, Conn.  
Rev. T. Schanfarber, Baltimore, Md.  
Rev. Dr. Claudius B. Spencer, Denver, Col.  
Mr. Thomas E. Wagaman, Washington, D. C.  
Miss Maria Whitney, Cambridge, Mass.  
Mrs. W. D. Whitney, New Haven, Conn.  
Dr. Thomas Wilson, Washington, D. C.

[Total, 37.]

President Gilman announced for the Directors that, Professor Jackson being unable to undertake the work of an editor, the conduct of the Journal for the ensuing year will be entrusted to Professor G. F. Moore.

The next meeting of the Society will be held in Easter week, 1898, beginning Thursday, April 14, either in Chicago or in Hartford, as may be subsequently determined by the Directors.

The Directors recommended that a committee of three be appointed by the President to take such steps as may seem desirable to see no candidates for membership in the Section for the Historical Study of Religions, and to report to the Directors at their next meeting. The recommendation was adopted. The President appointed Professors Toy, Jastrow, and Gottheil such committee.

It was resolved to request Congress to allow the duties on books, scientific instruments, and works of art to remain as in the existing law. The President and Secretaries were empowered to prepare and present such a request.

The nominating committee reported, and by unanimous consent the ballot of the Society was cast for the following officers for the ensuing year :

*President*—President Daniel Coit Gilman, of Baltimore.

*Vice-Presidents*—Dr. William Hayes Ward, of New York; Professor Crawford H. Toy, of Cambridge; Professor Charles R. Lanman, of Cambridge.

*Corresponding Secretary*—Professor Edward W. Hopkins, of New Haven, with Professor Hanns Oertel, of New Haven, as his deputy.

*Recording Secretary*—Professor George F. Moore, of Andover.

*Secretary of the Section for Religions*—Professor Morris Jastrow, Jr., of Philadelphia.

*Treasurer*—Mr. Henry C. Warren, of Cambridge.

*Librarian*—Mr. Addison Van Neste, of New Haven.

*Directors*—The officers above named: and President William R. Harper, of Chicago; Professors Richard Gottheil, A. V. W. Jackson, and Francis Brown, of New York; Professors Maurice Bloomfield and Paul Haupt, of Baltimore; and Professor Henry Hyvernat, of Washington.

On motion of Dr. Adler it was

*Resolved*, That the American Oriental Society has heard with pleasure of the proposed catalogue of Egyptian papyri and monuments; and that a committee of five be appointed to co-operate with the Smithsonian Institution in collecting a catalogue of the Egyptian material preserved in this country.

The committee was appointed: Dr. Cyrus Adler, Professor J. H. Breasted, Professor H. Hyvernat, the Rev. Dr. William C. Winslow, Dr. G. A. Reisner.

The business finished, the reading of communications was resumed. The following gentlemen presented papers: Carr, No. 5; Lau, No. 29; Ness, No. 33; Bright, No. 4; Johnston, No. 24; Hastings, No. 10; Smith, No. 45; Land, No. 26; Jackson, No. 21; Scott, No. 43; Bloomfield, No. 2; Haupt, Nos. 11, 15 and 12.

The hour for adjournment being now close at hand, the papers numbered 17 and 18 (by Hopkins), 46 (by Reisner), 30 (by Lovejoy), 47 (by Torrey), 38 (by Prince), 48, 50, and 49 (by Watson),

and 27 (by Lanman),—that is, for the most part, papers of members not present,—were read by title, and with or without a brief statement of their contents.

The following vote of thanks was unanimously adopted :

The American Oriental Society desires to express its most sincere thanks to the authorities of Johns Hopkins University for their kind invitation and reception ; to President Gilman for his pleasant hospitalities ; to the University Club for its courtesies ; and to the Committee of Arrangements for their effective services.

At 12.15 the Society adjourned, to meet Thursday, April 14, 1898.

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At a meeting of the Directors held immediately after adjournment, the following gentlemen were appointed to represent the American Oriental Society as Delegates to the Eleventh Session of the International Congress of Orientalists, to be held in Parie from the 5th to the 12th of September, 1897 : Professore Bloomfield and Haupt of Baltimore ; Professor Jackson of New York ; and Professore Lanman and Toy of Cambridge.

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The following is a list of papers which were either presented at the meeting or announced for presentation. They are alphabetically arranged according to authors. But papers No's 16, 22, and 39 do not appear to have been formally presented.

1. Dr. Cyrus Adler, U. S. National Museum ; A proposed Catalogue of Egyptian papyri and monuments.
2. Professor M. Bloomfield, Johnes Hopkins University ; On the position of the Gopatha Brähmana in Vedic Literature.
3. Professor M. Bloomfield, Johns Hopkins University ; On the meaning and etymology of the Vedic word *vidátha*.
4. Professor J. W. Bright, Johns Hopkins University ; A coincidence in Anglo-Saxon and Hebrew phonology.
5. Rev. S. J. Carr, Catholic University of America ; On a hitherto unknown treatise of Thomas of Edessa on the Nativity of our Lord.
6. Professor Richard Gottheil, Columbia University ; Persian influence in Arabic.
7. Professor Richard Gottheil, Columbia University ; Note on Dr. Torrey's article in the Journal of the Society, xviii. 176 ff.
8. Mr. K. J. Grimm, Johns Hopkins University ; Euphemistic liturgicall appendixes in the Psalms.

9. Rev. Adolph Guttmacher, Johns Hopkins University; Unintelligible archaisms in the Authorized Version.
10. Dr. W. W. Hastings, Springfield, Mass.; The permansive in Assyrian.
11. Professor Paul Haupt, Johns Hopkins University; The pronunciation of Hebrew.
12. Professor Paul Haupt, Johns Hopkins University; Ptolemaic Psalms.
13. Professor Paul Haupt, Johns Hopkins University; Babylonian words in Ezekiel.
14. Professor Paul Haupt, Johns Hopkins University; The amplificative plural in Hebrew.
15. Professor Paul Haupt, Johns Hopkins University; The unicorn in the Bible.
16. Mr. L. K. Hirshberg, Johns Hopkins University; The Brahma Somaj movement in India.
17. Professor E. W. Hopkins, Yale University; The Punjab and the Rig Veda.
18. Professor E. W. Hopkins, Yale University; Notes from India: (a) Bridles in sculpture and painting; (b) Buddha's woolly hair; (c) The veiled Jain at Badami; (d) Wooden fences in India; (e) The Anandashram.
19. Professor H. Hyvernat, Catholic University of America; The Coptic versions of the Bible.
20. Professor A. V. Williams Jackson, Columbia University; Note on play within play as a dramatic element on the Sanskrit stage.
21. Professor A. V. Williams Jackson, Columbia University; Brief Indo-Iranian contributions.
22. Professor A. V. Williams Jackson, Columbia University; The Amesha Spentas or Archangels in Zoroastrianism.
23. Dr. C. Johnston, Johns Hopkins University; The origin of Cuneiform writing.
24. Dr. C. Johnston, Johns Hopkins University; The scapegoat.
25. Professor Morris Jastrow, Jr., University of Pennsylvania; Nabopolassar and the temple to the Sun god at Sippar.
26. Rev. P. H. Land, Johns Hopkins University; Verba involuntaria in Semitic.

27. Professor C. R. Lanman, Harvard University; Indian Proverbs in Pāli Sources.
28. Professor C. R. Lanman, Harvard University; The discovery of the birth-place of Gotama Buddha.
29. Rev. Robert J. Lan, Columbia University; On some Babylonian temple records in the Library of Columbia University.
30. Mr. Arthur O. Lovejoy, Harvard University; On the meaning of the Buddhist technical terms *upādānum* and *upādānakhandhā*.
31. Professor Duncan Macdonald, Hartford Theological Seminary; Job and Muslim cosmography.
32. Professor George F. Moore, Andover Theological Seminary; The Arabic version of Genesis in Lagarde's *Materialien*.
33. Mr. J. A. Ness, Johns Hopkins University; On the meaning and etymology of the Sanskrit root *īl*.
34. Professor H. Oertel, Yale University; A new MS. of the Jāminīya Brāhmaṇa.
35. Professor H. Oertel, Yale University; Did Sāyaṇa know the Jāminīya Brāhmaṇa?
36. Professor H. Oertel, Yale University; The funeral ceremony according to the Jāminīya Brāhmaṇa.
37. Rev. Dr. J. P. Peters, New York; The geography of the Euphrates.
38. Professor J. D. Prince, New York University; The syntax of the Assyrian preposition *ana*.
39. Professor J. D. Prince, New York University; A Babylonian Cylinder in the possession of the New York University.
40. Rev. William Rosenau, Johns Hopkins University; Substitutes for the Tetragrammaton in the Rabbinical writings, with especial reference to *Eloqim*.
41. Rev. T. Schanfarber, Johns Hopkins University; Notes on Psalm xvi.
42. Dr. Charles P. G. Scott, Radnor, Penn.; The English words in Malayan.
43. Dr. Charles P. G. Scott, Radnor, Penn.; At large in Polynesia. [The laxness of phonetic laws in the Polynesian languages.]
44. Professor Henry Preserved Smith, Lakewood, N. J.; Was Mohammed's impulse received from Christian or from Jewish sources?

45. Professor Henry Preserved Smith, Lakewood, N. J.; Two brief notes on Arabic subjects: (*a*) "The guilt of the husbandmen," Bochari, i. 6; (*b*) The two messengers, Koran, 36. 12 ff.
46. Dr. G. A. Reisner, Harvard University; Old Babylonian systems of weights and measures.
47. Dr. Charles C. Torrey, Andover Theological Seminary; The origin of the words 'Troubadour' and 'Madrigal.'
48. Rev. W. Scott Watson, Towerhill, N. J.; A leather roll of the Pentateuch.
49. Rev. W. Scott Watson, Towerhill, N. J.; The etymology of the name Baalbek.
50. Rev. W. Scott Watson, Towerhill, N. J.; A Samaritan manuscript of the Hebrew text of the Pentateuch, written A. H. 35.

## LIST OF MEMBERS.

REVISED, MAY, 1897.

The number placed after the address indicates the year of election.

## I. HONORARY MEMBERS.

Prof. RAMKRISHNA GOPAL BHANDARKAR, Dekkan Coll., Poona, India. 1887.  
 His Excellency, OTTO BOERTLINGK, 23 Hoepital St., Leipzig, Germany. 1844.  
 Prof. GEORG BUEHLER, Univ. of Vienna, Austria. (8 Alser St., Vienna, IX.)  
     Corresp. Member, 1876; Hon., 1887.  
 Dr. ANTONIO MARIA CERIANI, Ambrosian Library, Milan, Italy. 1890.  
 Prof. ENWARD B. COWELL, Univ. of Cambridge, England. Corresp. Member, 1863; Hon., 1893.  
 Prof. BERTHOLD DELBENECK, Univ. of Jena, Germany. 1878.  
 Prof. FRIEDRICH DELITZSCH, Univ. of Breslau, Germany. (105 Kaiser Wilhelm St.) 1893.  
 Prof. IGNAZIO GUIDI, Univ. of Rome, Italy. (24 via Botteghe Oscure.) 1893.  
 Prof. HENDRIK KERN, Univ. of Leyden, Netherlands. 1893.  
 Prof. FRANZ KIELMANN, Univ. of Goettingen, Germany. (21 Hainbolzweg.) 1887.  
 Prof. Sir MONIER MONIER-WILLIAMS, Enfield House, Ventnor, Isle of Wight, England. 1882.  
 The Rt. Hon. Prof. F. MAX MUELLER, Univ. of Oxford, England. Corresp. Member, 1854; Hon., 1869.  
 Prof. THEODOR NOELNKE, Univ. of Strassburg, Germany. (16 Kalbsgasse.) 1878.  
 Prof. JULES OPPERT, Collège de France, Paris, France. (2 Rue de Sfax.) 1893.  
 Prof. EDUARD SACHAU, Univ. of Berlin, Germany. (12 Wormser St., W.) 1887.  
 Prof. ARCHIBALD H. SAYCE, Univ. of Oxford, England. 1893.  
 Prof. EBERHARD SCHRADER, Univ. of Berlin, Germany. (20 Kronprinzen-Ufer, N. W.) 1890.  
 Prof. FRIEDRICH SPIEGEL, Munich, Germany. (11 Heydn St.) Corresp. Member, 1863; Hon., 1869.  
 Prof. ALBRECHT WEBER, Univ. of Berlin, Germany. (56 Ritter St., S. W.) Corresp. Member, 1850; Hon., 1869.  
 Prof. ERNST WINDISCH, Univ. of Leipzig, Germany. (15 Universitäts St.) 1890. [Total, 20.]

## II. CORPORATE MEMBERS.

Names marked with † are those of life members.

Rev. CORNELIUS STEVENSON ABBOTT (St. Peter's Church), 347 State St., Brooklyn, N. Y. 1891.  
 Dr. CYRUS ADLER, U. S. National Museum, Washington, D. C. 1894.  
 Rev. J. L. AMERMAN, 25 East 22d St., New York, N. Y. 1893.  
 NAGEER J. ARBEELEY, 45 Pearl St., New York, N. Y. 1893.  
 Prof. EDWARD V. ARNOLD, University College of North Wales, Bangor, Great Britain. 1890.  
 Mrs. EMMA J. ARNOLD, 29 Greene St., Providence, R. I. 1894.  
 WILLIAM R. ARNOLD (Metropolitan Museum of Art), New York, N. Y. 1893.  
 Rev. EDWARD E. ATKINSON (Episcopal Theol. School), 1 Lawrence Hall, Cambridge, Mass. 1894.  
 IRVING BABBITT (Harvard Univ.), 63 Hammond St., Cambridge, Mass. 1892.  
 Prof. BENJAMIN WISNER BAILEY (Yale Univ.), 86 Trumbull St., New Haven, Conn. 1897.  
 Prof. MARK BAILEY, JR. (State Univ. of Washington), 1619 Chestnut St., Seattle, Wash. 1891.  
 Miss ANNIE L. BARBER, 1626 Massachusetts Ave., Cambridge, Mass. 1892.  
 Prof. GEORGE A. BARTON, Bryn Mawr College, Bryn Mawr, Pa. 1888.  
 Prof. L. W. BATTEN (Episcopal Divinity School), 4805 Regent St., Philadelphia, Pa. 1894.  
 Rev. DANIEL M. BATES, St. Stephen's Rectory, Clifton Heights, Pa. 1896.  
 Prof. CHARLES W. BENTON, Univ. of Minnesota, Minneapolis, Minn. 1896.  
 Rev. JOSEPH F. BERG, Ph.D., Montgomery, Orange Co., N. Y. 1893.  
 Dr. WILLIAM STURGIS BIOELOW, 66 Beacon St., Boston, Mass. 1894.  
 Prof. JOHN BINNEY, Berkeley Divinity School, Middletown, Conn. 1897.  
 Rev. DAVID BLAUSTEIN, 26 Summer St., Providence, R. I. 1891.  
 Prof. MAURICE BLOOMFIELD, Johns Hopkins University, Baltimore, Md. 1881.  
 Prof. CHARLES W. E. BOYD (General Theological Seminary), 9 Chelsea Square, New York, N. Y. 1897.  
 Dr. ALFRED BOISSIER, 4 Cours des Bastions, Geneva, Switzerland. 1897.  
 GEORGE M. BOLLINO, Catholic Univ. of America, Washington, D. C. 1896.  
 JAMES HENRY BREASTER, 515 62nd St., Englewood, Chicago, Ill. 1891.  
 Prof. CHAS. A. BRIGGS, 120 West 93rd St., New York, N. Y. 1870.  
 Prof. D. G. BRINTON, Media, Pa. 1888.  
 Miss SARAH W. BROOKS, 28 Inman St., Cambridgeport, Mass. 1896.  
 Prof. CHAS. RUFUS BROWN, Newton Theological Institution, Newton Centre, Mass. 1886.  
 Prof. FRANCIS BROWN, Union Theological Seminary, 700 Park Ave., New York, N. Y. 1881.  
 Prof. JOSEPH BRUNEAU, St. Joseph's Seminary, Yonkers, N. Y. 1896.  
 Prof. CARL DARLING BUEK, 5748 Madison Ave., Chicago, Ill. 1892.  
 Prof. S. BURNHAM, Colgate University, Hamilton, N. Y. 1896.  
 Pres. GEO. S. BURROUGHS, Wabash College, Crawfordsville, Ind. 1880.  
 Prof. HENRY F. BURTON, Rochester University, Rochester, N. Y. 1881.  
 Dr. W. CALAND, 486 Seeligsingel, Breda, Netherlands. 1897.

Rev. JOHN CAMPBELL (Church of the Incarnation), 4 West 104th St., New York, N. Y. 1896.

Prof. GEORGE R. CARPENTER, Columbia College, New York, N. Y. 1894.

Rev. SIMON J. CARR, Catholic University of America, Washington, D. C. 1892.

Prof. A. S. CARRIER (McCormick Theological Seminary), 1042 N. Halsted St., Chicago, Ill. 1890.

Prof. FRANKLIN CARTER, Williams College, Williamstown, Mass. 1873.

Dr. PAUL CABUS, La Salle, Illinois. 1897.

Dr. I. M. CASANOWICZ, U. S. National Museum, Washington, D. C. 1893.

Miss EVA CHANNING, 90 Huntington Ave., Mass. 1883.

Dr. FRANK DYER CHESTER (Harvard Univ.), Hotel Bristol, Boston, Mass. 1891.

CLARENCE H. CLARK, Locust and 42d Sta., Philadelphia, Pa. 1807.

Rev. HENRY N. COBB, 25 East 22d St., New York, N. Y. 1875.

Prof. CAMDEN M. COBERN, 1830 Sherman Ave., Denver, Colorado. 1894.

Wm. EMMETTE COLEMAN, Chief Quartermaster's Office, San Francisco, Cal. 1885.

†GEORGE WETMORE COLLES, 231 Schermerhorn St., Brooklyn, N. Y. 1882.

Prof. HERMANN COLLITZ, Bryn Mawr College, Bryn Mawr, Pa. 1887.

Miss ELIZABETH S. COLTON, Easthampton, Mass. 1896.

SAMUEL VICTOR CONSTANT, 420 West 23d St., New York, N. Y. 1890.

Dr. FREDERIC TABER COOPER, 177 Warburton Ave., Yonkers, N. Y. 1892.

Miss LUTIE REBECCA CORWIN, Mt. Holyoke Seminary, South Hadley, Mass. 1895.

CLARK EUGENE CRANDALL (Univ. of Chicago), 5455 Monroe Ave., Hyde Park, Chicago, Ill. 1886.

Mrs. OLIVER CRANE, 12 Concord Square, Boston, Mass. 1891.

Prof. STEWART CULIN (Univ. of Pennsylvania), 127 South Front St., Philadelphia, Pa. 1888.

Prof. EDWARD L. CURTIS (Yale Univ.), 61 Trumbull St., New Haven, Conn. 1890.

Dr. CHAS. H. STANLEY DAVIS, Meriden, Conn. 1893.

Prof. JOHN D. DAVIS, Theological Seminary, Princeton, N. J. 1888.

Prof. GEORGE E. DAY (Yale Univ.), 125 College St., New Haven, Conn. 1848.

LEE MALTBY DEAN (Yale Univ.), 576 Iranistan Ave., Bridgeport, Conn. 1897.

Rev. EPHRAIM DEINARD, 88 Windsor St., Kearny, N. J. 1894.

Rev. SAMUEL N. DEINARD, 317 South Fourth St., Terre Haute, Ind. 1894.

Dr. P. L. ARMAND DE POTTER, 1488 Broadway, New York, N. Y. 1880.

Rev. LYSANDER DICKERMAN, Astor Library, New York, N. Y. 1882.

Rev. DR. SAMUEL F. DIKE, Bath, Me. 1883.

EPES SARGENT DIXWELL, 58 Garden St., Cambridge, Mass. 1818.

Rev. D. STUART DODGE, 9 Cliff St., New York, N. Y. 1867.

Prof. JAMES F. DRISCOLL, St. Joseph's Seminary, Dunwoodie, N. Y. 1897.

Prof. HENRY DRISLER, 48 West 46th St., New York, N. Y. 1853.

SAMUEL F. DUNLAP, 18 West 22nd St., New York, N. Y. 1854.

HARRY WESTBROOK DUNNING, 7 St. Johns St., Jamaica Plain, Mass. 1894.

Jos. H. DURKEE, care of Messrs. White & Wainwright, 45 Broadway, New York, N. Y. 1894.

WILBERFORCE EAMES, Lenox Library, 890 Fifth Ave., New York, N. Y. 1897.

Dr. AUGUST HJALMAR EDOREN (University of Nebraska), Lincoln, Neb. 1876.

ALBERT J. EDMUNDS, Historical Society of Pennsylvania, 1300 Locust St., Philadelphia, Pa. 1896.

CARL J. ELOFSON, 3826 Eighth Ave., Rock Island, Ill. 1891.

Prof. LEVI H. ELWELL, Amherst College, Amherst, Mass. 1883.

Prof. CHARLES CARROLL EVERETT (Harvard Univ.), 58 Garden St., Cambridge, Mass. 1859.

MARSHALL BRYANT FANNINO, Powder Point School, Duxbury, Mass. 1897.

Prof. EDWIN WHITFIELD FAY, Washington and Lee Univ., Lexington, Va. 1888.

ERNEST F. FENOLLOSA, Museum of Fine Arts, Boston, Mass. 1894.

Prof. HENRY FERGUSON, Trinity College, Hartford, Conn. 1876.

†Lady CAROLINE FITZ MAURICE, 2 Green St., Grosvenor Square, London, England. 1886.

†FRANK B. FORBES, 50 Rue de la Victoire, Paris, France. 1864.

†Hon. JOHN M. FORBES, 80 Sears Bldg., Boston, Mass. 1847.

Miss MAUDE FORTESCUE, 57 Fifth Ave., New York, N. Y. 1890.

JAS. EVERETT FRAME, 80 White St., East Boston, Mass. 1892.

Prof. ARTHUR L. FROTHINGHAM, JR., Coll. of N. J., Princeton, N. J. 1883.

Dr. WILLIAM H. FURNESS, 3d, Wallingford, Delaware Co., Penn. 1897.

HENRY LEE GILBERT, 3508 Hamilton St., West Philadelphia, Pa. 1892.

Prof. BASIL L. GILDERSLEEVE, Johns Hopkins Univ., Baltimore, Md. 1858.

Miss ELLEN R. GILES, Bryn Mawr College, Bryn Mawr, Penn. 1897.

Pres. DANIEL COIT GILMAN, Johns Hopkins Univ., Baltimore, Md. 1857.

RALPH L. GOODRICH, Clerk of the U. S. Court, Little Rock, Ark. 1883.

Prof. WILLIAM WATSON GOONWIN (Harvard Univ.), 5 Follen St., Cambridge, Mass. 1857.

Prof. RICHARD J. H. GOTTHEIT (Columbia Univ.), 169 West 93d St., New York, N. Y. 1886.

JACOB GRAPE, JR., 482 East 20th St., Baltimore, Md. 1888.

LOUIS H. GRAY, Princeton Univ., Princeton, N. J. 1897.

Prof. W. HENRY GREEN, Theological Seminary, Princeton, N. J. 1855.

Miss LUCIA GRAEME GRIEVE, 1105 Halsey St., Brooklyn, N. Y. 1894.

KARL JOSEPH GRIMM (Johns Hopkins Univ.), Baltimore, Md. 1897.

Dr. J. B. GROSSMANN, 1942 North Sixth St., Philadelphia, Pa. 1894.

Rabbi Dr. LOUIS GROSSMANN, Temple Beth El, Detroit, Mich. 1890.

CHAS. F. GUNTHER, 212 State St., Chicago, Ill. 1889.

Rev. ADOLPH GUTTMACHER, 1883 Linden Ave., Baltimore, Md. 1896.

The Right Rev. CHAS. R. HALZ, Bishop of Cairo, Cairo, Ill. 1860.

Prof. ROBERT FRANCIS HARPER, Univ. of Chicago, Chicago, Ill. 1886.

Pres. WILLIAM RAINIER HARPER, Univ. of Chicago, Chicago, Ill. 1885.

Prof. SAMUEL HART, Trinity College, Hartford, Conn.

Dr. WILLIAM W. HASTINGS, Springfield, Mass. 1893.

Prof. PAUL HAUPT (Johns Hopkins Univ.), 2315 Linden Ave., Baltimore, Md. 1883.

Rev. HENRY HARRISON HAYNES, 6 Ellery St., Cambridge, Mass. 1892.  
Rev. WILLIS HATFIELD HAZARD, West Chester, Pa. 1893.  
RALPH B. C. HICKS (Harvard Univ.), 65 Hammond St., Cambridge, Mass. 1896.  
Col. THOS. WENTWORTH HIGGINSON, 25 Buckingham St., Cambridge, Mass. 1869.  
Prof. HERMANN V. HILFRECHT (Univ. of Pennsylvania), 403 South 41st St., Philadelphia, Pa. 1887.  
LEONARD KEENE HIRSBERG (Johns Hopkins Univ.), 581 Gay St., Baltimore, Md. 1890.  
Prof. EDWARD WASHBURN HOPKINS (Yale Univ.), 235 Bishop St., New Haven, Conn. 1881.  
Prof. JAMES M. HOPPIN (Yale Univ.), 47 Hillhouse Ave., New Haven, Conn. 1882.  
MONTAUE HOWARD, 264 Fifth Ave., New York, N. Y. 1891.  
Miss ANNIE K. HUMPHERY, 1114 14th St., Washington, D. C. 1878.  
Prof. HENRY HYVERNAT (Catholic Univ. of America), Washington, D. C. 1889.  
Prof. A. V. WILLIAMS JACKSON (Columbia Univ.), 16 Highland Place, Yonkers, N. Y. 1885.  
Rev. MARCUS JASTROW, 65 West Upsilon St., Germantown, Pa. 1887.  
Prof. MORRIS JASTROW, Jr. (Univ. of Pennsylvania), 248 South 23d St., Philadelphia, Pa. 1886.  
Rev. HENRY F. JENKS, P. O. Box 148, Canton, Mass. 1874.  
Prof. JAMES RICHARD JEWETT (Univ. of Minnesota), 266 Summit Ave., St. Paul, Minnesota. 1887.  
Prof. JOSHUA A. JOFFÉ (Jewish Theological Seminary), 736 Lexington Ave., New York, N. Y. 1894.  
Dr. CHRISTOPHER JOHNSTON (Johns Hopkins Univ.), 5 West Chase St., Baltimore, Md. 1889.  
R. P. KARKARIA, Nepean Road, Malabar Hill, Bombay, India. 1897.  
HERBERT KAUFMAN, Johns Hopkins University, Baltimore, Md. 1897.  
Prof. MAXIMILIAN LINDSEY KELLNER, Episcopal Theological School, Cambridge, Mass. 1886.  
Miss ELIZA H. KENDRICK, Ph.D. (Radcliffe College), Hunnewell Ave., Newton, Mass. 1896.  
Dr. CHARLES FOSTER KENT (in Europe), care of Mr. W. H. Kent, Palmyra, N. Y. 1890.  
Miss ELIZABETH T. KING, 849 Park Ave., Baltimore, Md. 1897.  
GEORGE ALEXANDER KOHUT, 160 East 72d St., New York, N. Y. 1894.  
Rev. JOSEPH KRAUSKOFF, 105 East Upsilon St., Germantown, Pa. 1888.  
Rev. PAUL HENRY LAND, Johns Hopkins University, Baltimore, Md. 1897.  
Prof. CHARLES ROCKWELL LANMAN (Harvard Univ.), 9 Farrar St., Cambridge, Mass. 1876.  
Rev. JOSEPH LANMAN, First Presbyterian Chnrch, Princeton, Caldwell Co., Kentucky. 1896.  
Rev. ROBERT J. LAU (Columbia University), P. O. Box 162, Weehawken, N. J. 1897.

THOMAS B. LAWLER, 39 May St., Worcester, Mass. 1894.  
 CASPAR LEVIAS, Hebrew Union College, Cincinnati, Ohio. 1892.  
 Rev. CLIFTON HARSBY LEVY, 100 East 91st St., New York, N. Y. 1890.  
 ROBERT LILLEY, 72 Fifth Ave., New York, N. Y. 1894.  
 Prof. THOMAS B. LINDSAY, Boston Univ., Boston, Mass. 1883.  
 HENRY F. LINSCOTT, University of North Carolina, Chapel Hill, N. C. 1896.  
 Rev. ARTHUR LLOYD, Keio Gijuku College, Tokio, Japan. 1893.  
 Rev. LINDSAY B. LONGACRE, Spuyten Duyvil, New York, N. Y. 1897.  
 Gen'l CHARLES G. LORING (Museum of Fine Arts), 1 Mt. Vernon Place,  
     Boston, Mass. 1877.  
 ARTHUR ONCKEN LOVEJOY (Harvard University), Oakland, Cal. 1897.  
 PERCIVAL LOWELL, care of A. L. Lowell, 58 State St., Boston, Mass. 1893.  
 Prof. JULER LUQUIENS (Yale Univ.), 201 Bishop St., New Haven, Conn.  
     1873.  
 †BENJ. SMITH LYMAN, 708 Locust St., Philadelphia, Penn. 1871.  
 Prof. DAVID GORDON LYON (Harvard Univ.), 9 Buckingham St., Cambridge,  
     Mass. 1882.  
 Prof. DUNCAN B. MACDONALD (Hartford Theological Seminary), 815 Asylum  
     Ave., Hartford, Conn. 1893.  
 Prof. HERBERT W. MAGOUN (Oberlin College), 115 West Lorain St., Oberlin,  
     O. 1887.  
 Rev. JOHN R. MARONEY, St. Mary's Seminary, Baltimore, Md. 1897.  
 Dr. MAX L. MARGOLIS, Hebrew Union College, Cincinnati, O. 1890.  
 Prof. ALLAN MARQUAND, College of New Jersey, Princeton, N. J. 1888.  
 Prof. DAVID C. MARQUIS (McCormick Theological Seminary), 322 Belden  
     Ave., Chicago, Ill. 1890.  
 Prof. WINFRED ROBERT MARTIN, Trinity College, Hartford, Conn. 1889.  
 Rev. DONALD J. MCKINNON, Catholic University of America, Washington,  
     D. C. 1897.  
 Prof. CHAS. MARSH MEAD, Hartford Theological Seminary, Hartford, Conn.  
     1867.  
 Rev. DR. SELAH MERRILL, Andover, Mass. 1873.  
 Mrs. HELEN L. MILLION (*née* LOVELL), Hardin College, Mexico, Missouri.  
     1892.  
 Rev. DR. LAWRENCE H. MILLS, 29 Ifley Road, Oxford, England. 1881.  
 Dr. ALFRED BERNARD MOLDENKE, 124 East 46th St., New York, N. Y. 1892.  
 Dr. CHARLES E. MOLDENKE, 124 East 46th St., New York, N. Y. 1885.  
 Prof. CLIFFORD H. MOORE, Univ. of Chicago, Chicago, Ill. 1893.  
 Prof. GEORGE F. MOORE, Theological Seminary, Andover, Mass. 1887.  
 Prof. PAUL ELMER MORE, Bryn Mawr College, Bryn Mawr, Pa. 1893.  
 Prof. EDWARD S. MORSE, Salem, Mass. 1894.  
 Rev. A. J. ELDER MULLAN, S. J. (Woodstock College), Woodstock, Howard  
     Co., Md. 1889.  
 ISAAC MYER, 21 East 80th St., New York, N. Y. 1888.  
 JENS ANDERSON NESS (Johns Hopkins University), Red Wing, Minn. 1897.  
 GEORGE NATHAN NEWMAN, 80 Bryant St., Buffalo, N. Y. 1891.  
 Prof. CHARLES ELIOT NORTON, Harvard Univ., Cambridge, Mass. 1887.  
 Prof. HANNS OERTZEL (Yale Univ.), 81 York Sq., New Haven, Conn. 1890.  
 GEORGE N. OLcott, Columbia Coll., New York, N. Y. 1892.

†ROBERT M. OLYMPHANT, 166 Madison Ave., New York, N. Y. 1861.  
JOHN ORNE, 104 Ellery St., Cambridge, Mass. 1890.  
GEORGE W. OSBORN, New York University, University Heights, New York, N. Y. 1894.  
Rev. GEORGE PALMER PARDINGTON, 164 Park Place, Brooklyn, N. Y. 1896.  
Prof. LEWIS B. PATON, Hartford Theological Seminary, Hartford, Conn. 1894.  
Dr. CHARLES PEABODY, 197 Brattle St., Cambridge, Mass. 1892.  
Prof. ISMAR J. PERITZ, 716 Madison St., Syracuse, N. Y. 1894.  
Prof. MARSHALL L. PERRIN (Boston Univ.), Wellesley Hills, Mass. 1892.  
Prof. EDWARD DELAVAN PERRY (Columbia Univ.), 133 East 55th St., New York, N. Y. 1876.  
Rev. Dr. JOHN P. PETERS (St. Michael's Church), 225 West 90th St., New York, N. Y. 1882.  
Prof. DAVID PHILIPSON, Hebrew Union College, Cincinnati, O. 1889.  
Prof. SAMUEL BALL PLATNER, Adelbert College, Cleveland, O. 1885.  
MURRAY E. POOLE, 21 East State St., Ithaca, N. Y. 1897.  
WILLIAM POPPER (Columbia University), 69½ Bambridge St., Brooklyn, N. Y. 1897.  
MURRAY ANTHONY POTTER (Harvard University), 508 California St., San Francisco, Cal. 1893.  
Prof. IRA M. PRICE (Univ. of Chicago), Morgan Park, Ill. 1897.  
Prof. JOHN DYNELEY PRINCE, New York University, University Heights, New York, N. Y. 1888.  
HUO RANAU, General Theological Seminary, Chelsea Square, New York, N. Y. 1896.  
Madame ZÉNAÏDE A. RAOZZIN, 207 East 18th St., New York, N. Y. 1886.  
Rev. F. P. RAMSEY, Savannah, Georgia. 1889.  
Dr. GEORGE ANDREW REISNER (Harvard Univ.), 21 Walker St., Cambridge, Mass. 1891.  
Dr. CHARLES RICE, Bellevue Hospital, New York, N. Y. 1875.  
EDWARD ROBINSON, Museum of Fine Arts, Boston, Mass. 1894.  
Prof. GEORGE LIVINGSTON ROBINSON, Knox College, Toronto, Canada. 1892.  
Hon. WILLIAM WOODVILLE ROCKHILL, Washington, D.C. 1890.  
Prof. ROBERT W. ROGERS, Drew Theological Seminary, Madison, N.J. 1888.  
JAMES HARDY ROPES (Harvard University), 29 Divinity Hall, Cambridge, Mass. 1898.  
Rev. WILLIAM ROSENAU (Johns Hopkins University), Baltimore, Md. 1897.  
SANFORD L. ROTTER, 55 Oak St. (or care of E. J. Smith & Co., 65 and 67 Asylum St.), Hartford, Conn. 1894.  
Miss ADELAIDE RUDOLPH, 434 Madison Ave., New York, N. Y. 1894.  
Mrs. JANET E. RUTTZ-REES, Rosemary Hall, Wallingford, Conn. 1897.  
THOMAS H. P. SAILER, 4046 Spruce St., Philadelphia, Pa. 1890.  
†Prof. EDWARD E. SALISBURY, 287 Church St., New Haven, Conn. 1842.  
Prof. FRANK K. SANDERS (Yale University), 77 Mansfield St., New Haven, Conn. 1897.  
Rev. TOBIAS SCHAFARBER (Johns Hopkins University), 2939 Madison Ave., Baltimore, Md. 1897.

Dr. H. ERNEST SCHMID, White Plains, N. Y. 1866.  
 Prof. NATHANIEL SCHMIDT, Cornell Univ., Ithaca, N. Y. 1894.  
 Dr. CHARLES P. G. SCOTT, Radnor, Pa. 1895.  
 J. HERBERT SENTER, 10 Avon St., Portland, Maine. 1870.  
 THOMAS STANLEY SIMONDS, College St. James, Washington Co., Md. 1892.  
 MACY M. SKINNER (Harvard Univ.), 82 College House, Cambridge, Mass. 1894.  
 Dr. DAVID H. SLEEM, 42 West 97th St., New York, N. Y. 1892.  
 Prof. HENRY PRESERVEN SMITH, Lakewood, New Jersey. 1877.  
 Prof. HERBERT WEIR SMYTH, Bryn Mawr, Penn. 1884.  
 MAXWELL SOMMERVILLE, 124 North Seventh St., Philadelphia, Pa. 1890.  
 Rev. Dr. CLAUDIO B. SPENCER, Denver, Colorado. 1897.  
 Dr. EDWARD H. SPIEKER, Johns Hopkins Univ., Baltimore, Md. 1884.  
 Rev. JAMES D. STEELE, 20 West 93d St., New York, N. Y. 1892.  
 Prof. J. H. STEVENSON, Vanderbilt University, Nashville, Tenn. 1890.  
 Mrs. SARA YORKE STEVENSON, 237 South 21st St., Philadelphia, Pa. 1890.  
 ALFRED W. STRATTON, 404 Euclid Ave., Toronto, Canada (or Chicago Univ., Chicago, Ill.). 1894.  
 MAYER SULZBERGER, 1303 Girard Ave., Philadelphia, Pa. 1888.  
 Prof. JOHN PHELPS TAYLOR, Theological Seminary, Andover, Mass. 1884.  
 Prof. J. HENRY THAYER (Harvard Univ.), 67 Sparks St., Cambridge, Mass. 1874.  
 Prof. HENRY A. TOWN (Columbia Coll.), 730 West End Ave., New York, N. Y. 1885.  
 Prof. HERBERT CUSHING TOLMAN, Vanderbilt Univ., Nashville, Tenn. 1890.  
 Dr. CHARLES C. TORREY, Theological Seminary, Andover, Mass. 1891.  
 Prof. CRAWFORD H. TOY (Harvard Univ.), 7 Lowell St., Cambridge, Mass. 1871.  
 Prof. JOSEPH VINCENT TRACY, St. Mary's Seminary, Baltimore, Md. 1892.  
 Rev. HENRY CLAY TRUMBULL, 4103 Walnut St., Philadelphia, Pa. 1888.  
 Hon. J. HAMMOND TRUMBULL, 784 Asylum St., Hartford, Conn. 1860.  
 Prof. CHARLES MELLEN TYLER, Cornell Univ., Ithaca, N. Y. 1894.  
 ADDISON VAN NAME (Yale Univ.), 121 High St., New Haven, Conn. 1868.  
 EDWARD P. Vining, 532 Market St., San Francisco, Cal. 1888.  
 THOMAS E. WAGGAMAN, 917 F St., N. W., Washington, D. C. 1807.  
 †THOMAS WALSH, Yokohama, Japan. 1861.  
 Miss SUSAN HAYES WARD, Abington Ave., Newark, N. J. 1874.  
 Dr. WILLIAM HAYES WARD, 130 Fulton St., New York, N. Y. 1800.  
 Miss CORNELIA WARREN, 67 Mt. Vernon St., Boston, Mass. 1894.  
 †HENRY CLARKE WARREN, 12 Quincy St., Cambridge, Mass. 1882.  
 Pres. WILLIAM F. WARREN, Boston Univ., Boston, Mass. 1877.  
 Rev. W. SCOTT WATSON, Towerhill, P. O. Göttingen, N. J. 1893.  
 Rev. EDWARD WEBB, Lincoln Univ., Oxford, Chester Co., Pa. Corresp. Member, 1860; Corp., 1869.  
 Prof. J. E. WERREN, P. O. Box 149, Abington, Mass. 1894.  
 Prof. BENJAMIN IDE WHEELER (Cornell Univ.), 3 South Ave., Ithaca, N. Y. 1885.  
 Prof. JOHN WILLIAMS WHITE (Harvard Univ.), 18 Concord Ave., Cambridge, Mass. 1877.

Dr. MOSES C. WHITE (Yale Univ.), 48 College St., New Haven, Conn. Corresp. Member, 1853; Corp., 1860.

Miss MARIA WHITNEY, 2 Divinity Ave., Cambridge, Mass. 1897.

Mrs. WILLIAM DWIGHT WHITNEY, 227 Chrnrch St., New Haven, Conn. 1897.

Dr. EARLEY VERNON WILCOX, Montana College of Agriculture and Mechanic Arts, Bozeman, Montana. 1896.

FREDERICK WELLS WILLIAMS (Yale Univ.), 135 Whitney Ave., New Haven, Conn. 1895.

TALCOTT WILLIAMS ("The Penn"), 331 Sonth 16th St., Philadelphia, Pa. 1894.

Dr. THOMAS WILSON, U. S. National Mnseum, Washington, D. C. 1897.

Rev. WILLIAM C. WINSLOW, 525 Beacon St., Back Bay, Boston, Mass. 1885.

Dr. ALBRECHT WIRTH. [Address desired.] 1894.

Rev. STEPHEN S. WISE (Madison Aveuno Synagogno), 119 East 65tb St., New York, N. Y. 1894.

HENRY B. WITTON, Inspector of Canals, 16 Murray St., Hamilton, Ontario. 1885.

Rev. CHARLES JAMES WOOD, St. John's Rectory, York, Pa. 1892.

Prof. HENRY WOOD, Johns Hopkins Univ., Baltimore, Md. 1884.

Prof. THEODORE F. WRIGHT, 42 Quincy St., Cambridge, Mass. 1898.

Rev. ABRAHAM YOHANNAN, St. Bartholomew's Parish House, 205 East 42d St., New York, N. Y. 1894.

Rev. EDWARD J. YOUNG, 519 Main St., Waltham, Mass. 1869.

[TOTAL, 275.]

### III. CORRESPONDING MEMBERS.

Prof. GRAZIADIO ISAIA ASCOLI, Royal Academy of Sciences and Letters, Milan, Italy.

Rev. C. C. BALDWIN (formerly Missionary at Foochow, Cbina), 105 Spruce St., Newark, N. J.

Prof. ADOLF BASTIAN, Univ. of Berlin, Germany. 1866.

Pres. DANIEL BLISS, Syrian Protestant Coll., Beirut, Syria.

Rev. HENRY BLODOET (formerly Missionary at Peking, Cbina), 313 State St., Bridgeport, Conn. 1858.

Rev. ALONZO BUNKER, Missionary at Toungoo, Burma. 1871.

Rev. MARCUS M. CARLETON, Missionary at Ambala, India.

Rev. EDSON L. CLARK, Hinsdale, Mass. Corp. Member, 1867.

Rev. WILLIAM CLARK, Florence, Italy.

Judge ERNEST H. CROSBY, International Court of Alexandris, Berkely, Alexandria (Care of the Department of State, Washington, D. C.), Egypt. 1890.

Rev. JOSEPH EDEKINS, Shanghai, China. 1869.

A. A. GARGIULO, U. S. Legation, Constantinople, Turkey. 1892.

HENRY GILLMAN, U. S. Consnl at Jerusalem, Turkey. 1890.

Rev. Dr. JOHN T. GRAOET (Editor of *The Missionary Review of the World*), 177 Pearl St., Rochester, N. Y. 1869.

GEORGE A. GRIERSON, Bengal Civil Service, Baukipur, Bengal. 1898.

Rev. LEWIS GROUT, West Brattleboro, Vt. 1849.

Rev. JOHN T. GULICK, Missionary at Osaka, Japan.  
 Dr. WILLARD HASKELL, 98 Dwight St., New Haven, Conn. 1877.  
 Prof. J. H. HAYNES, Central Turkey College, Aintab, Syria. 1887.  
 Dr. JAMES C. HEPBURN, Missionary at Yokohama, Japan. 1873.  
 Dr. A. F. RUDOLF HOERNLE, The Madrasa, Wellesley Square, Calcutta, Bengal. 1893.  
 Rev. SAMUEL R. HOUSE, M.D., Waterford, N. Y. 1856.  
 DASTUR JAMASPIJI MINOCHEHERJI JAMASPI ABANA, Parsi Panchayet Lane, Bombay, India. 1887.  
 Rev. HENRY H. JESSUP, Missionary at Beirut, Syria.  
 Rev. Dr. SAMUEL H. KELLOGG, The Firs, Laudour, Mussoorie, N. W. P., India. 1872.  
 Rev. Prof. ALBERT L. LONG (Robert College), Constantinople, Turkey. 1870.  
 Rev. ROBERT S. MACLAY (formerly Missionary at Tokio, Japan), President of the Univ. of the Pacific, Fernando, Cal.  
 Pres. WILLIAM A. P. MARTIN, Audubon Park, West 156th St., New York, N. Y. 1858.  
 Dr. DIVIE BETHUNE McCARTREY, American Presbyterian Mission, Tokio, Japan. 1857.  
 Prof. EBERHARD NESTLE, Ulm, Württemberg, Germany. 1888.  
 Dr. ALEXANDER G. PASPATI, Athens, Greece. 1861.  
 Rev. STEPHEN D. PEET, Good Hope, Ill. 1881.  
 ALPHONSE PINART. [Address desired.] 1871.  
 Rev. ELIAS RIGGS, Missionary at Constantinople (Bible House), Turkey.  
 Prof. LÉON DE ROSNY (École des langues orientales vivantes), 47 Avenue Duquesne, Paris, France. 1857.  
 Rev. Dr. S. I. J. SCHERESCHEWSKY, Shanghai, China.  
 Rev. W. A. SHEDD, Missionary at Oroomiah, Persia. 1893.  
 Dr. JOHN C. SUNDBERG, U. S. Consul, Baghdad, Turkey. 1898.  
 Rev. GEORGE N. THOMSEN, of the American Baptist Mission, Kurnool, Madras, India. (Now at 432 Fifteenth St., Brooklyn, N. Y.) Corp. Member, 1890; Corresp., 1891.  
 Rev. GEORGE T. WASHBURN, Missionary at Pasumalai, Madura, India.  
 Rev. JAMES W. WAUCH, Missionary at Luokuow, India. (Now at Ocean Grove, N. J.) 1878.  
 Rev. JOSEPH K. WIGHT, New Hamburg, N. Y. Corp. Member, 1860.  
 [TOTAL, 42.]

Number of Members of the three classes (20 + 275 + 42 = 337.)

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#### I. AMERICA.

BOSTON, MASS.: American Academy of Arts and Sciences.  
 PHILADELPHIA, PA.: American Philosophical Society.  
 WASHINGTON, D. C.: Smithsonian Institution.  
     Bureau of American Ethnology.  
 WORCESTER, MASS.: American Antiquarian Society.

## II. EUROPE.

AUSTRIA, VIENNA: Kaiserliche Akademie der Wissenschaften.  
 Anthropologische Gesellschaft.

PRAGUE: Königlich Böhmischa Gesellschaft der Wissenschaften.

DENMARK, ICELAND, REYKJAVIK: University Library.

FRANCE, PARIS: Société Asiatique. (Rue de Seine, Palais de l'Institut.)  
 Académie des Inscriptions et Belles-Lettres.  
 Bibliothèque Nationale.  
 Musée Guimet. (Avenue du Trocadéro.)  
 École des Langues Orientales Vivantes. (Rue de Lille, 2.)  
 Société Académique Indo-Chinoise.

GERMANY, BERLIN: Königlich Preussische Akademie der Wissenschaften.  
 Königliche Bibliothek.

GÖTTINGEN: Königliche Gesellschaft der Wissenschaften.

HALLE: Bibliothek der Deutschen Morgenländischen Gesellschaft. (Friedrichstr. 50.)

LEIPZIG: Königlich Sachsische Gesellschaft der Wissenschaften.

MUNICH: Königlich Bairische Akademie der Wissenschaften.  
 Königlich Hof- und Staatsbibliothek.

GREAT BRITAIN, LONDON: Royal Asiatic Society of Great Britain and Ireland  
 (22 Albemarle st., W.)  
 Library of the India Office. (Whitehall, SW.)  
 Society of Biblical Archeology. (87 Great Russell St., Bloomsbury, WC.)  
 Philological Society. (Care of Dr. F. J. Furnivall,  
 3 St. George's Square, Primrose Hill, NW.)

ITALY, FLORENCE: Società Asiatica Italiana.

ROME: Reale Accademia dei Lincei.

NETHERLANDS, AMSTERDAM: Koninklijke Akademie van Wetenschappen.

THE HAGUE: Koninklijk Instituut voor Taal-, Land-, en Volkenkunde van Nederlandsch Indië.

LEIDEN: Curatorium of the University.

NORWAY, CHRISTIANIA: Videnskabs-Selskab.

SWEDEN, UPSALA: Humanistiska Vetenskaps-Samfundet.

RUSSIA, ST. PETERSBURG: Imperatorskeja Akademija Nauk.  
 Archeologij Institut.

## III. ASIA.

CEYLON, COLOMBO: Ceylon Branch of the Royal Asiatic Society.

CHINA, PEKING: Peking Oriental Society.

SHANGHAI: North China Branch of the Royal Asiatic Society.

INDIA, BOMBAY: Bombay Branch of the Royal Asiatic Society.

CALCUTTA: The Asiatic Society of Bengal.  
 The Buddhist Text Society. (86 Jaun Bazar St.)

LAHORE: Library of the Oriental College.

JAPAN, TOKIO: The Asiatic Society of Japan.

JAVA, BATAVIA: Bataviaasch Genootschap van Kunsten en Wetenschappen.

TURKEY, CONSTANTINOPLE: Imperial Ottoman Museum.

## IV. AFRICA.

EGYPT, CAIRO: The Khedivial Library.

## V. EDITORS OF THE FOLLOWING PERIODICALS.

The Indian Antiquary (care of the Education Society's Press, Bombay, India).  
Wiener Zeitschrift für die Kunde des Morgenlandes (care of Alfred Hölder, Rothenthurm-str. 15, Vienna, Austria).

Zeitschrift für vergleichende Sprachforschung (care of Prof. E. Kuhn, 3 Hess-str., Munich, Bavaria).

Indogermanische Forschungen (care of Prof. W. Streitberg, Freiburg, Switzerland).

Revue de l'Histoire des Religions (care of M. Jean Réville, chez M. E. Leroux, 28 rue Bonaparte, Paris, France).

Revue des Études Juives. (Librairie A. Durlacher, 83 bis, rue Lafayette, Paris, France.)

Revue Archéologique. (Rue de Lille, 2, Paris, France.)

Zeitschrift für die alttestamentliche Wissenschaft (care of Prof. Bernhard Stade, Giessen, Germany).

Beiträge zur Assyriologie und Semitischen Sprachwissenschaft. (J. C. Hinrichs'sche Buchhandlung, Leipzig, Germany.)

Orientalische Bibliographie (care of Dr. Lucian Scherman, 8 Gisela Str., Munich, Bavaria).

The American Antiquarian and Oriental Journal, Good Hope, Illinois.

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## REQUEST.

The Editors request the Librarians of any Institutions or Libraries, not mentioned above, to which this Journal may regularly come, to notify them of the fact. It is the intention of the Editors to print a list, as complete as may be, of regular subscribers for the Journal or of recipients thereof. The following is the beginning of such a list.

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Chicago University Library.

Harvard Sanskrit Class-Room Library.

Harvard Semitic Class-Room Library.

Harvard University Library.

CONSTITUTION AND BY-LAWS  
OF THE  
AMERICAN ORIENTAL SOCIETY.

With Amendments of April, 1897.

CONSTITUTION.

**ARTICLE I.** This Society shall be called the AMERICAN ORIENTAL SOCIETY.

**ARTICLE II.** The objects contemplated by this Society shall be:—

1. The cultivation of learning in the Asiatic, African, and Polynesian languages, as well as the encouragement of researches of any sort by which the knowledge of the East may be promoted.

2. The cultivation of a taste for oriental studies in this country.

3. The publication of memoirs, translations, vocabularies, and other communications, presented to the Society, which may be valuable with reference to the before-mentioned objects.

4. The collection of a library and cabinet.

**ARTICLE III.** The members of this Society shall be distinguished as corporate and honorary.

**ARTICLE IV.** All candidates for membership must be proposed by the Directors, at some stated meeting of the Society, and no person shall be elected a member of either class without receiving the votes of as many as three-fourths of all the members present at the meeting.

**ARTICLE V.** The government of the Society shall consist of a President, three Vice-Presidents, a Corresponding Secretary, a Recording Secretary, a Secretary of the Section for the Historical Study of Religions, a Treasurer, a Librarian, and seven Directors, who shall be annually elected by ballot, at the annual meeting.

**ARTICLE VI.** The President and Vice-Presidents shall perform the customary duties of such officers, and shall be *ex officio* members of the Board of Directors.

**ARTICLE VII.** The Secretaries, Treasurer, and Librarian shall be *ex officio* members of the Board of Directors, and shall perform their respective duties under the superintendence of said Board.

**ARTICLE VIII.** It shall be the duty of the Board of Directors to regulate the financial concerns of the Society, to superintend its publications, to carry into effect the resolutions and orders of the Society, and to exercise a general supervision over its affairs. Five Directors at any regular meeting shall be a quorum for doing business.

**ARTICLE IX.** An Annual meeting of the Society shall be held during Easter week, the days and place of the meeting to be determined by the Directors, said meeting to be held in Massachusetts at least once in three

years. One or more other meetings, at the discretion of the Directors, may also be held each year at such place and time as the Directors shall determine.

ARTICLE X. There shall be a special Section of the Society, devoted to the historical study of religions, to which section others than members of the American Oriental Society may be elected in the same manner as is prescribed in Article IV.

ARTICLE XI. This Constitution may be amended, on a recommendation of the Directors, by a vote of three-fourths of the members present at an annual meeting.

#### BY-LAWS.

I. The Corresponding Secretary shall conduct the correspondence of the Society, and it shall be his duty to keep, in a book provided for the purpose, a copy of his letters; and he shall notify the meetings in such manner as the President or the Board of Directors shall direct.

II. The Recording Secretary shall keep a record of the proceedings of the Society in a book provided for the purpose.

III. a. The Treasurer shall have charge of the funds of the Society; and his investments, deposits, and payments shall be made under the superintendence of the Board of Directors. At each annual meeting he shall report the state of the finances, with a brief summary of the receipts and payments of the previous year.

III. b. After December 31, 1896, the fiscal year of the Society shall correspond with the calendar year.

III. c. At each annual business meeting in Easter week, the President shall appoint an auditing committee of two men—preferably men residing in or near the town where the Treasurer lives—to examine the Treasurer's accounts and vouchers, and to inspect the evidences of the Society's property, and to see that the funds called for by his balances are in his hands. The Committee shall perform this duty as soon as possible after the New Year's day succeeding their appointment, and shall report their findings to the Society at the next annual business meeting thereafter. If these findings are satisfactory, the Treasurer shall receive his acquaintance by a certificate to that effect, which shall be recorded in the Treasurer's book, and published in the Proceedings.

IV. The Librarian shall keep a catalogue of all books belonging to the Society, with the names of the donors, if they are presented, and shall at each annual meeting make a report of the accessions to the library during the previous year, and shall be further guided in the discharge of his duties by such rules as the Directors shall prescribe.

V. All papers read before the Society, and all manuscripts deposited by authors for publication, or for other purposes, shall be at the disposal of the Board of Directors.

VI. Each corporate member shall pay into the treasury of the Society an annual assessment of five dollars; but a donation at any one time of seventy-five dollars shall exempt from obligation to make this payment.

VII. Corporate and Honorary members shall be entitled to a copy of all the publications of the Society issued during their membership, and shall

also have the privilege of taking a copy of those previously published, so far as the Society can supply them, at half the ordinary selling price.

VIII. If any corporate member shall for two years fail to pay his assessments, his name may, at the discretion of the Directors, be dropped from the list of members of the Society.

IX. Members of the Section for the Historical Study of Religions shall pay into the treasury of the Society an annual assessment of two dollars; and they shall be entitled to a copy of all printed papers which fall within the scope of the Section.

X. Six members shall form a quorum for doing business, and three to adjourn.

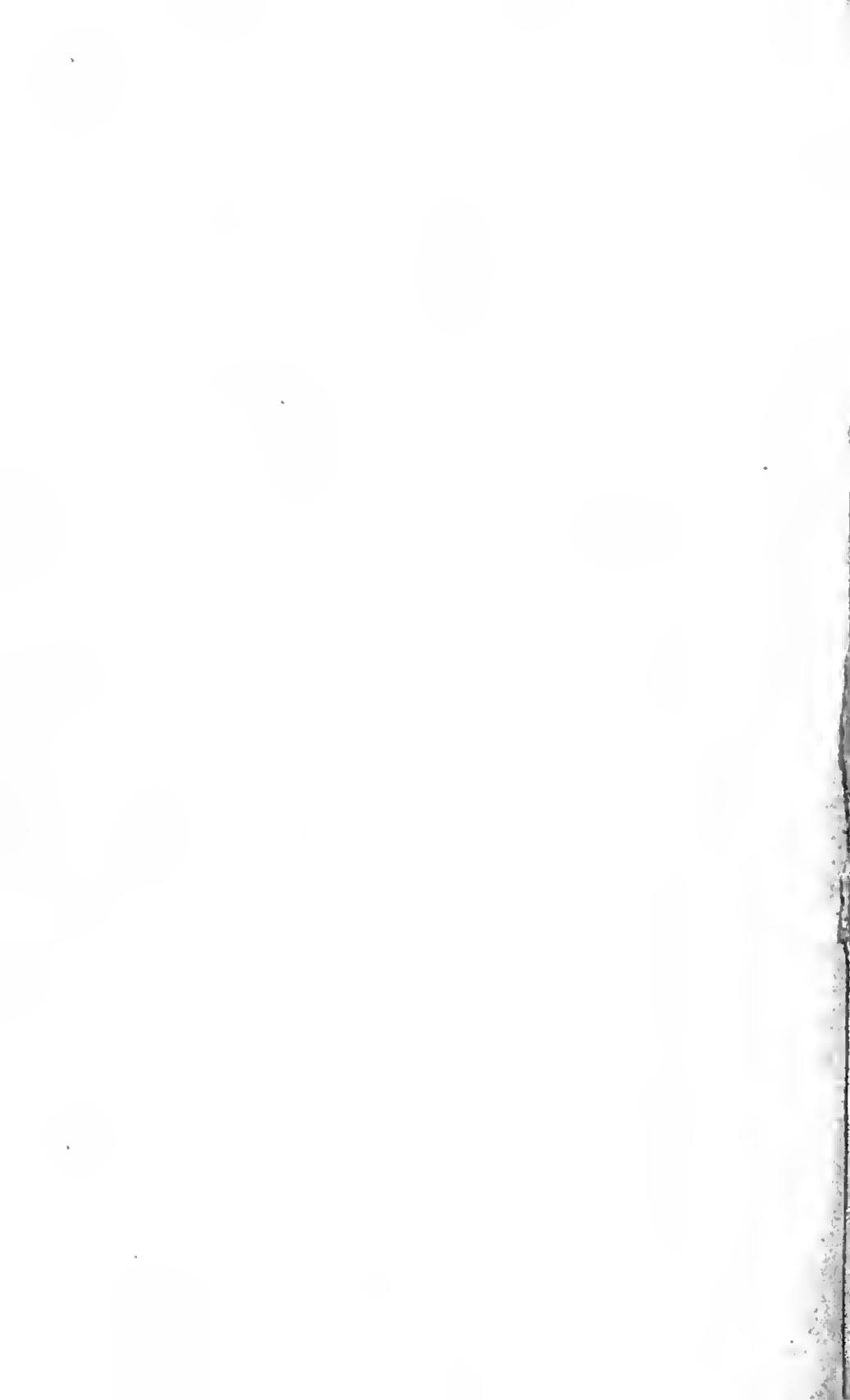
#### SUPPLEMENTARY BY-LAW.

##### I. FOR THE LIBRARY.

1. The Library shall be accessible for consultation to all members of the Society, at such times as the Library of Yale College, with which it is deposited, shall be open for a similar purpose; further, to such persons as shall receive the permission of the Librarian, or of the Librarian or Assistant Librarian of Yale College.

2. Any member shall be allowed to draw books from the Library upon the following conditions: he shall give his receipt for them to the Librarian, pledging himself to make good any detriment the Library may suffer from their loss or injury, the amount of said detriment to be determined by the Librarian, with the assistance of the President, or of a Vice-President; and he shall return them within a time not exceeding three months from that of their reception, unless by special agreement with the Librarian this term shall be extended.

3. Persons not members may also, on special grounds, and at the discretion of the Librarian, be allowed to take and use the Society's books, upon depositing with the Librarian a sufficient security that they shall be duly returned in good condition, or their loss or damage fully compensated.



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1. Members are requested to give immediate notice of changes of address to the Treasurer, Mr. Henry C. Warren, 12 Quincy Street, Cambridge, Mass.
2. It is urgently requested that gifts and exchanges intended for the Library of the Society be addressed as follows : "The Library of the American Oriental Society, New Haven, Connecticut, U. S. America."
3. For information regarding the sale of the Society's publications, see the next foregoing page.
4. Communications for the Journal should be sent to Prof. Geo. F. Moore, Andover, Mass.

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## CONCERNING MEMBERSHIP.

It is not necessary for any one to be a professed Orientalist in order to become a member of the Society. All persons—men or women—who are in sympathy with the objects of the Society and willing to further its work are invited to give it their help. This help may be rendered by the payment of the annual assessments, by gifts to its library, or by scientific contributions to its Journal, or in all of these ways. Persons desiring to become members are requested to apply to the Treasurer, whose address is given above. Members receive the Journal free. The annual assessment is \$5. The fee for Life-Membership is \$75.



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